Lectures
ON
THE SURGICAL TREATMENT OF ANEURISM
IN ITS VARIOUS FORMS.

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LECTURE I.—PART I.

MR. PRESIDENT AND GENTLEMEN,—Before speaking on the subject which I have chosen, I must be allowed to tender my heartfelt thanks to the Council of this College for the favour they have shown me in nominating me your Professor of Pathology and Surgery. It is a great distinction to have been thought not unworthy of succeeding to the long series of famous surgeons who have delivered the lectures on Surgery at this College. I am fully sensible, indeed, how little anything I have done in surgery has merited such an honour, and still more painfully sensible how little I can do to support it. I can only trust to your indulgence to compensate my deficiencies. Still I can assure you that however little I may be able to do, that little shall be done sincerely and honestly. I hope you may not have to charge me with having used the position you have given me to broach crude theories, or to recommend rash treatment more dangerous than the maladies for which it professes to provide a cure. My subject will lead me to speak of many of the great exigencies of surgery, of desperate lesions of the great channels of the circulation—maladies which have hitherto defied our best efforts to control them, and which, indeed, till comparatively recent times were hardly considered objects of deliberate surgical treatment. I shall endeavour to give, perhaps, a somewhat less gloomy view of some of those affections than is often taken, to prove that they are sometimes at least under the control of surgical art, and, in the terms of my professorship of "Pathology and Surgery," to show you that some of the more modern plans for the treatment of internal aneurism rest upon a sound pathological basis. If so, the inference that their practice is justifiable cannot be questioned. Yet I would not be understood as putting these measures on the same footing as those which we have been in the habit of using for external aneurism, whose action we are familiar with, and whose success has been established by practice. The measures which I shall have to treat of as used in aneurisms of the thorax and abdomen are at best doubtful remedies for diseases which are wellnigh incurable. Those who practise them must be prepared for frequent disappointment—nay, for a preponderance, I fear, of failure over success,—a mortifying contrast to the brilliant results of many other kinds of operation. But this surely ought not to deter us. Our art is promoted by facing difficulties, not by avoiding them; and if we can succeed in rescuing even a small proportion of patients labouring under such deadly maladies from the fate which is otherwise inevitable, every feeling of humanity and of surgical duty forbids us to shrink from the attempt, however difficult it may prove, and whatever mortifications we may endure in making it.

I have selected my present subject—the surgical treatment of aneurism in its various forms—for several reasons; partly because it is long since it has been treated of at this College, and in the interval the most remarkable progress has been made—in fact, the practice of surgery has, we might almost say, been entirely revolutionised; partly because so much doubt and difference of opinion still prevail with respect to many of the questions connected with this subject; and again because so much interesting and instructive matter exists in literature, in our own pathological museum, and in the various other museums of London and elsewhere, which if I can succeed in bringing together into an intelligible whole, I may hope to contribute to the settlement of some of the questions which are yet in abeyance.

Our profession, Sir, is more free, I think, than any other from those miserable jealousies of nation against nation, and school against school, which hinder the progress of knowledge in so many of its branches. We are always glad to receive any improvement in practice, whether its origin is British, Continental, American, or Asiatic. But we do not profess ourselves, nor ought we to feel, indifferent as to whether English surgery is maintaining the place in which our fathers handed it down to us; nor would it be other than a humiliation, and a most just one to us, if English surgeons had changed from teachers to learners. Thank God that is not so at present; though we are glad enough to learn from anyone, we can still say with truth that very much of what has been taught to the world in modern times of the art of surgery has been taught by the members of this College. I need hardly mention that the greatest masters of two of the chief improvements of modern surgery—the practice of excision of joints and the practice of ovariotomy—sit on our Council. So also in the branch of surgery with which I am now concerned. Foreign surgeons have contributed much that is valuable to the treatment of aneurism, but the successors and pupils of John Hunter have borne, as they ought to have borne, the foremost part in it. As it was from him that that great invention emanated which first brought aneurism within the power of successful treatment, so it is from those who were trained in his school that the ideas proceeded by which that success has been extended. The treatment of aneurism has, indeed, improved since Hunter's day, but anyone who studies the subject can see that there are few of those improvements (excepting the grand discovery of anæsthesia) the germs of which are not contained in the operations and the writings of those famous surgeons of Hunter's school whose busts adorn our vestibule, and whose undying memory is the most precious of all the possessions of our College.

The subject of aneurism was treated at this College forty-three years ago by Mr. Guthrie in the famous course of lectures delivered by him as professor of anatomy and surgery, and which formed the substance of his work "On the Diseases and Injuries of Arteries." That work has become one of our surgical classics, and added fresh lustre to the name of one of the most celebrated surgeons in Europe. But, admirable and complete as that treatise was when it was published, it dealt with the subject of surgical treatment in a manner which has now become antiquated. The treatment by compression, though it could count great authorities in its favour, though tried by Hunter, and strongly advocated by Freer, was then in its infancy, and is dismissed by Mr. Guthrie in a few half-contemptuous sentences.* The distal operation is indeed discussed more adequately, but from imperfect data, and with a result which can hardly be accepted as satisfactory. In fact, the conclusion to which we are brought is, that an aneurism which is not curable by the Hunterian operation is, with few exceptions, not curable at all. Since the surgeons of Dublin showed how to apply pressure to an extent which is tolerable without chloroform, so as to produce the gradual consolidation of the aneurism, all this is totally changed. Acting on this fertile suggestion, surgeons in all parts of the world have been studying fresh and milder methods of curing popliteal and other aneurisms. We have seen with astonishment the success of the simple plan of flexion of the limb in popliteal aneurisms, whereby that formidable disease is sometimes cured in a day or two by a mere change in position so slight as hardly even to cause inconvenience, much less pain or danger, to the patient. More wonderful still, perhaps, we have seen the great modification which has been introduced into the practice of surgery by the use of rapid pressure continued for many hours (in a recent case more than two days) under chloroform, whereby deep-seated aneurisms in the abdomen, and even aneurism of the lower part of the abdominal aorta itself, have been permanently cured, and a disease has been proved to be under the control of our art which in Mr. Guthrie's day would have been regarded as utterly beyond any surgical treatment.

Stimulated by these great successes, surgeons have now begun to regard no form of aneurism, however near the heart, as absolutely incurable; and to seek for means of

* On the Diseases and Injuries of Arteries, p. 143.

checking the growth, at least, if not of finally obliterating, those tumours in which the vessel affected is itself inaccessible. Hence the introduction into general use of a number of new plans of treatment, such as electro-puncture, manipulation, the introduction of foreign bodies into the sac, coagulating injections,—and hence also the renewed impetus given to the use of the distal operation. Now I will admit at once that none of these novel methods has as yet proved regularly successful; but I cannot help contending that some of them, at any rate, have shown enough in their favour, both from pathological anatomy and surgical experience, to justify—nay, to necessitate—their further trial in appropriate cases, and to excite confident hopes of their future successful application regularly to certain classes of cases in which they have already succeeded, though only occasionally, and, as it were, hap-hazard. We should be committing, I believe, the same error which those fell into who passed over the treatment by compression as unworthy of serious discussion on account of its rare successes and dubious advantages when first tried, if we similarly repudiated without further inquiry the use of the methods to which I have alluded, because hitherto, applied as they are nearly exclusively in the more formidable classes of aneurism, they have for the most part proved unsuccessful. It is only too evident, however, that the discussion of topics of this sort will lead me into questions on which the widest difference of opinion prevails; and it is equally evident that a course of six lectures affords too little space to do more than indicate in the briefest manner my reasons for the conclusions to which I shall desire to lead you. I must be pardoned, therefore, if, in speaking of the surgical treatment of thoracic, subclavian, and abdominal aneurisms, I omit all but the most indispensable references to the pathology and diagnosis of those affections. You will, I hope, attribute this omission to the limits imposed upon me.

The treatment of a subject such as this has not become more easy since Mr. Guthrie wrote. There was then almost a deficiency of material; there is now almost a plethora. So many and so well-stocked have become our pathological museums, even in London alone, that it is difficult for anyone occupied by other duties to master their contents. I have, however, to thank the authorities of the various museums for the kindest assistance and the most liberal communication of all the stores contained in their collections. More especially I have to express my gratitude to the surgeons of the Dublin hospitals, and more particularly to the Council of the Royal College of Surgeons in Ireland, for placing at our disposal a large number of highly valuable preparations, some of them of great historical interest, which I pointed out as likely to elucidate my subject. Personally unknown as I am in Ireland, I cannot construe this unusual courtesy as done merely to myself, but it affords a gratifying proof of their good feeling to this College, and of their desire to assist any effort, weak as it may be, to improve the knowledge of a disease from whose successful treatment Irish surgeons have already done so much. It is my duty as well as my great pleasure to acknowledge above all the very kind assistance which my friend, Mr. W. Stokes, has rendered to me in this matter.

As with pathological specimens, so with published material; its bulk in the present day outruns the best efforts of any one inquirer to keep up with it. Statistical writers indeed afford us the clues to the vast labyrinth of literature in which the various topics are treated. But their collections, even if they could be made free from serious errors, which usually is far from being the case, are, after all, composed of materials of the most widely different value: many of the cases upon which their numerical summaries are founded being, when investigated, hardly worthy of serious attention; so that in all cases the original sources must be used. I have, therefore, entirely renounced the idea of treating any of these topics with reference to statistical completeness, nor, in enforcing my own opinions as well as I am able, will I weary you with a tedious enumeration of those of others. I will only cite, from the literature to which I have had access, as much as I think necessary to support my conclusions.

I have already put into your hands a detailed prospectus of each lecture; but I think it will also be useful to state more succinctly the main propositions which I hope to establish in this course. They are as follows:—

1. That aneurisms, of whatever form and however near the heart they may be, ought not to be regarded as incurable, but should be made the objects of definite methodical treatment, internal or external.

2. That there is definite proof, from pathological anatomy and from surgical experience, of the curative influence of Brasdor's operation in innominate aneurism, and of its beneficial effects in some cases of aortic aneurism.

3. That arteries may be successfully tied and obliterated without their continuity being interrupted; and that this modification of the ligature, whilst affording much security against secondary hæmorrhage, and thus much diminishing the danger of the operation in general, may very probably in future enable surgeons to deal successfully with cases in which it may be necessary to tie the first part of the subclavian (whether on the distal or proximal side of an aneurism) or the innominate artery.

4. That galvano-puncture may be used with at any rate temporary benefit in thoracic aneurism; that its use is not so dangerous as to render further trials of it inexpedient; and that there is good hope that the method may be so far perfected as to make it a safe and regular plan for the treatment of thoracic, subclavian, and other forms of aneurism.

5. That many cases, such as those in which ligature of the artery near to the heart has been resorted to for the cure of subclavian and subclavio-axillary aneurism, may be made amenable to improved methods of pressure.

6. That aneurismal tumours situated even as high as the lower part of the abdominal aorta, those of the mesenteric and other branches of the aorta, and of the iliac arteries, may be treated with success by rapid coagulation of blood under pressure; but that this method is a dangerous one, and should not be used until internal treatment has failed.

7. That there are cases of abdominal aneurism in which Mr. Syme's suggestion of reviving the old operation is worthy of further trial.

Besides these positive conclusions, I shall hope to suggest the main considerations applicable to questions on which I see no ground at present for any definitive judgment, such as the value of manipulation in subclavian, or of distal pressure in abdominal aneurism.

The first fact that I will start with, as a basis for all that I am going to say about the surgical treatment of internal thoracic aneurisms, is the very elementary fact that such aneurisms are not incurable, whether they affect the aorta or the innominate artery. Numerous instances are on record in which persons affected with aneurism of the arch of the aorta have, either spontaneously or as the result of medical treatment, been restored to a condition of tolerable health, have lived for a long period of time, and have ultimately died from other causes. I do not wish to weary you with instances of what I take to be admitted on all hands, but I shall have occasion incidentally to refer to various instances of this as I proceed.

I do not for a moment question, what indeed pathological anatomy proves beyond dispute, that aneurisms of these great arteries are very often caused by a widespread degeneration of the arterial system, and that even if we could cure the aneurism which is for the time under treatment, another may very probably soon show itself, or there may be another actually present, but undetected, which may cause death quite unexpectedly while we are directing treatment to the one which is visible. This fact is strikingly exemplified by a case which Mr. Christopher Heath recently published,* where a patient who had undergone spontaneous cure of an aneurism of the left subclavian soon afterwards came under treatment for aneurism of the subclavian and root of the carotid on the right side. He was judged to be an unfavourable subject for operative interference, so that no active treatment was undertaken, and the suspicion was verified by his sudden death from the rupture of an aortic aneurism, the symptoms of which had been masked during life by those of the other disease. The cure, therefore, of the one aneurism did not prevent the rapid development of the second, and treatment directed to it, however successfully, would not have averted his death which was inevitable from the growth of the third.

But allowing that it is difficult to obtain complete consolidation in an aneurism of such large arteries, and that the

* Clin. Soc. Trans., vol. iii., p. 6. Patho. Trans., vol. xx.

cure when obtained affords no guarantee for permanent recovery, it is still evidently our duty to attempt the treatment of the disease if cure is possible—nay more, if even alleviation and the prolongation of life is possible. Now this latter is not only possible but easy. Judicious medical treatment, with rest systematically enforced, is almost always followed by temporary improvement. And in aneurisms which are growing in any definite direction, and whose growth in that direction threatens important organs, or is likely to lead to rupture of the sac, there is always a chance of stopping such growths for the time, and so possibly preserving the patient's life. I venture to say that this point is hardly enough considered. We think so much of whether an aneurism can be completely consolidated or not that we are apt to forget how often its partial consolidation only is followed by such an alleviation of the symptoms as amounts almost to temporary cure.

Let me spend one minute here in combating an objection which I recently heard made against all endeavours to apply treatment with a view of producing consolidation in the external or accessible part of a thoracic aneurism. Such consolidation, it was said, allowing that it could be produced, would be injurious instead of beneficial; for the external part of the sac acts as a sort of safety-valve to protect its internal portion from pressure, so that the effect of obliterating the part which is growing under the skin would be to throw the force of the circulation on the intrathoracic portion, and so hasten the rupture of the sac. This objection looks plausible at first sight; but it seems to me to have no real foundation either in clinical experience or in pathology. In fact, the history of such cases as those which I shall bring before you shows that the consolidation of one part of such a tumour is never, or hardly ever, followed by any symptoms of increased growth in another part; and the way in which an aneurism extends appears to me to be, not by a passive yielding to fluid pressure applied generally to its interior, but by an active growth, attended very probably with inflammatory softening of a part of its wall. And I hold that the more of the circumference of an aneurism we can defend, and, as it were, plaster up with solid and adherent clot, the safer do we render our patient against this fatal tendency of the sac to bud out and ultimately to burst.

I may instance the case which furnished this series of drawings lent me by Dr. Cockle. You will notice that the tumour, which was of moderate size externally when the patient first came under observation, has grown actively towards the skin till it diffused itself in the cellular tissue, forming an immense cushion, enveloping all the root of the neck, and causing death either by dyspnœa or subcutaneous hæmorrhage. If the external portion could have been solidified, the internal part of the sac, for anything we know or could know, might have been already solid enough to bear the weight of the blood-stream, and sufficiently far from any source of irritation to be free from the risk of active softening. In fact, why leave your patient exposed to one danger, visibly imminent, because you think that, if you deliver him from this, he may fall into another of the existence of which you have no proof?

The prospects of cure in a case of thoracic aneurism vary with an infinite number of circumstances besides the presence or absence of extensive disease of the arterial system. One of the most obvious of these is the shape of the tumour. Cylindriform aneurisms (such as that here figured from the museum of St. George's Hospital*) are obviously far less susceptible of a cure than those which are sacculated or lateral. In these cases, however, the symptoms are less serious. The patient in question suffered but little from the aneurismal dilatation, though it extended downwards as far as the axilla, and reached up the neck half-way to the jaw; and his death was very probably unconnected with this disease. Lately I saw at the Royal Free Hospital two patients of Dr. Cockle's affected with an apparently similar disease, but who had had it for ten years and four years respectively, and were suffering really very little from it.

But though the cure of such a condition is not probable, it is far from being impossible. The preparation here produced, from the museum of this College (No. 1641) shows a smaller dilatation of this kind, affecting only the arch of the aorta, in which the whole tube is lined with layers of fibrine, leaving a channel in the middle about the natural size of the aorta; and here, as you will notice, the cure is accompanied by impaction of clot in the mouth of the left subclavian. The preparation is unfortunately unaccompanied by a history; but there can be little question that the aneurismal dilatation was at least temporarily cured.

The opposite condition, that of sacculated or lateral aneurism, is shown in this drawing from a preparation in the museum of St. Thomas's Hospital (Series Y, No. 61.) I do not suggest that an aneurism so enormous as this is curable by any surgical means. I shall use the case afterwards in speaking of the treatment of thoracic aneurisms by galvano-puncture. But it is clear that, if we could produce coagulation in the primary sac—that which is lying between the arch of the aorta and the chest-wall—before the formation of the large external secondary sac, there is no reason why the further growth of the tumour should not be permanently checked, since the stream of blood through the mouth of the aneurism is neither very direct nor extremely large. And that medical treatment may prove efficacious in curing an aneurism as enormous as this, the following very interesting drawing and history of a preparation in the museum of St. Bartholomew's Hospital will prove. The following is the history of the patient in the fifth volume of the Pathological Society's Transactions, related by Mr. Harvey Ludlow:—

"G. A——, aged forty-seven, a publican, short in stature, consulted Mr. Stanley, at St. Bartholomew's Hospital, in October, 1847, for a large pulsating tumour in the right breast, which was rapidly increasing. The tumour was semi-oval in shape, of considerable size, and projected to the right of the sternum, almost immediately behind the nipple. Its long axis was oblique, and corresponded with the direction of the fibres of the lesser pectoral muscle. Although no bruit was audible, the aneurismal nature of the tumour was at once manifest. The pulse in both radials was feeble, and the superficial veins of the left side of the neck were turgid and dilated. The lower edge of the second rib, a portion of the whole thickness of the third, and the upper edge of the fourth, had been removed by absorption. He did not complain of much pain, but more of a general sense of uneasiness and oppression. His respiration was increased in frequency, he had a troublesome cough, and expectorated large quantities of a clear slimy mucus. He had suffered from pain in the chest, of a sharp spasmodic character, for a year before he consulted Mr. Stanley, and he had been teased for some time with a hacking cough, accompanied with expectoration of a clear adhesive mucus. An external swelling was first observed about five months before; it was then of small size, and pulsated strongly.

"The disorder being obviously irremediable by art, the man was advised to return home and keep himself as quiet as possible. In conformity with this advice he remained in bed, and took nothing but beef-tea, milk, and light puddings. The tumour rapidly increased and pulsated more strongly. Three months after his consultation with Mr. Stanley it equalled in size and shape the half of a cocoa-nut, had produced absorption of part of the second and fifth ribs, and had entirely removed about two inches and a half of the third and fourth. The greater distension and varicosity of the superficial veins of the neck and abdomen, joined to the aggravated cough and increased difficulty of breathing, seemed to show that the disease was advancing both within and without the chest. It was now Christmas, 1847, and from this time no further enlargement of the external tumour was observed; its walls gradually lost their compressibility, and slowly hardened, first at the extreme convexity and then at the base. The pulsations too progressively diminished in force, and by the end of March, 1848, were scarcely perceptible.

"While these changes were taking place in the tumour, the man himself had become pale, emaciated, and so feeble as to require an improved diet and stimuli. He had not left his bed for six months, but in the spring he began to move about in a wheel-chair. The respiration was laboured and the cough remained troublesome, but neither seemed to get worse. The external tumour became, at length, pulseless, hard, and incompressible, and stood up like a solid growth from the right wall of the chest. In this state he lived four years and a half, and might probably have lived longer had not the general election of 1852 excited him to deviate from the tranquil and abstemious

* The case is to be found in the Patho. Trans., vol. iii., p. 80.

habits which he practised. He exposed himself imprudently, was seized with suppurative pleurisy, and died."

The preparation shows the entire consolidation of both the primary or intrathoracic, and the secondary or external sac. The opening is seen to be in precisely the same situation as in the former preparation—viz., midway between the aortic valves and the innominate artery, and it leads into a cavity which (as Mr. Harvey Ludlow describes it) would have about contained a horse-chesnut.

I could refer, of course, to many cases in which aneurisms of the thoracic aorta have been found to be spontaneously cured in the post-mortem examination of persons who have died of other diseases*; but I have preferred to adduce the above case as illustrating better than any of the others that I have met with the truth that persistent and systematic efforts should be made to save life or to prolong life under such circumstances. Too often, I fear, the disease is regarded as inevitably fatal, and as hardly an object for definite treatment at all. I do not know that I could express my meaning better than by reproducing what Signor Ciniselli says with regard to the cases of spontaneous cure of aortic aneurisms†:—"Allowing that the rarity of the examples of such cures proves to us that we ought not to wait for the resources of nature in cases of the same kind, they nevertheless show us that cure by coagulation of blood is possible in every species of aneurism, and that it may occur without the obliteration of the affected vessel. That which nature shows to be possible, art ought to endeavour to imitate or promote. It is on this maxim that the progress of the physical arts and sciences rests, as well as the chief achievements of surgery."

Other thoracic aneurisms susceptible of surgical treatment are such as affect the innominate artery, or the roots of the left carotid or subclavian within the thorax, or, as is usually the case, one or more of these great arteries simultaneously with the arch of the aorta.

Now, as to pure innominate aneurism (which I incline to think is less rare than is generally believed), it, like aneurism of the aorta, may be either of the tubular (peripheral) variety or of the sacculated (lateral). But this is not a matter of the same importance in respect of its curability as in the case of an aneurism of the aorta, since a pure innominate aneurism, though tubular as regards the innominate, is sacculated as regards the aorta—that is to say, it stands out as a bud from the main stream of blood, and coagulation may readily go on in it. Nay, unless its origin from the aorta is very large and diseased, complete coagulation must, I think, occur in such a tumour if the distal orifices (those of the subclavian and carotid) can be obliterated.

Many preparations might be adduced which show the possibility of cure in innominate aneurism. As an instance of spontaneous cure, this preparation (from the museum of St. George's Hospital) with its history is especially in point. I shall have occasion to refer to the case more in detail hereafter while discussing the indications for the distal ligature of the carotid in such tumours and its effects. Suffice it to say here that the aneurism was so far cured by distal impaction of clot in the carotid artery that the patient suffered no further symptoms of aneurism during the four years and a half which preceded his death from consumption, though the whole of the sac is not obliterated.

As an instance of the cure of such an aneurism by surgical means, I would adduce Mr. Fearn's well-known case, in which the double distal operation was performed. Here also the sac is not completely obliterated, and the patient's death happened much sooner after the last operation than in the previous instance; still the symptoms of aneurism had been entirely relieved, and the probability is that the disease would have given no further trouble.

It being admitted, then, that cases of growing aneurism, affecting the thoracic aorta, or the innominate, or the roots of the left carotid or subclavian within the thorax, or affecting the aorta and one or more of its primary branches simultaneously, are not to be regarded as wholly incurable, the next question is, What are the means hitherto devised for their treatment? They are three in number—namely: internal or medical treatment; the distal ligature, or Brasdor's operation; and galvano-puncture.

* Good examples may be found in Hodgson, Diseases of the Arteries, pl. vi.; Dr. Bristowe in Patho. Soc. Trans., vol. x., p. 83.

† Sulla Elettro-punttura nella cura degli Aneurismi.

I pass over the injection of ergotine into the cellular tissue around the sac, which has been said in a foreign medical journal to have been recently recommended by Langenbeck, since that distinguished surgeon has not as yet published his own version of the proposal. The theory of the matter as explained by the journalist seems to me utterly unintelligible, but I have made trial of the method in two cases, with results which were perfectly nugatory; and I have not succeeded in discovering that the experience of others has been more satisfactory. I pass over, also, the plan of introducing a mass of fine iron-wire into the sac, as practised by my late friend, Mr. Moore; since I think no one will deny that it is not more certain than galvano-puncture, while it is far more likely to cause inflammation of the sac-wall. Since Mr. Moore's death, the operation, I find, has been twice repeated—namely, by Dr. Murray of Newcastle,* in a case which terminated by suppuration of the sac; and by Mr. Dumville of Chatham,† without any definite result. The sac has also been transfixed with fine needles with the same object.

With regard to the internal or medical treatment I shall say very little, since I could add nothing to the admirable exposition lately given of it by Mr. Jolliffe Tufnell.‡ The extreme bleedings recommended by Valsalva have been discarded as calculated to excite the heart to irritable action and to impoverish the blood, thus both impairing nutrition, and so endangering the rupture of the sac, and rendering the blood less fit for coagulation. But the valuable parts of Valsalva's treatment have been retained and methodised. The patient is confined strictly to the recumbent position during a very long period, the most minute precautions being taken to ensure that he can be kept without raising himself once from the bed during many weeks; his food is restricted to the smallest quantity of nutritious solids that can satisfy his appetite, and his drink to the very smallest quantity which can be tolerated. Much stress is justly laid by Mr. Tufnell on this latter precaution, and Dr. Sibson also testifies to the extreme importance of restricting the quantity of fluid to the lowest possible point. The medical treatment of the case otherwise consists almost exclusively in the administration of such narcotics as may be absolutely necessary to calm pain and procure sleep, and such purgatives as may be required to keep the patient comfortable, and avoid all straining in defecation. The great object is to keep the pulse at an equable rate, a little over 60, and free from all excitement. Though Valsalva's extreme bleedings are avoided, a very small venesection may be occasionally serviceable with this view. I would strongly urge any surgeon undertaking for the first time the care of a case of internal aneurism to study Mr. Tufnell's invaluable little pamphlet, which shows how much may be done for the relief of conditions usually regarded as hopeless, and by how simple, safe, and painless a method. I will not discuss the value of the drugs which have been recommended as producing the coagulation of blood in an aneurismal sac further than to say that my experience of the iodide of potassium and the acetate of lead has been hitherto quite negative, though I have made careful trial of both; that I can point to no less than three cases in which an aneurism first showed itself and continued to grow while the patient was suffering from symptoms of lead colic, and that I am therefore disposed to accept the dictum of the recent Croonian lecturer at the College of Physicians, Dr. Bristowe, who said that in his opinion there is not any medicine capable of bringing about, or assisting in bringing about, the result of plugging an aneurism with coagula except in so far as it aids in promoting tranquillity of circulation. He adds, also, that he cannot think that any other plan of treatment which might tend to promote coagulation at the expense of the patient's general health would be admissible.§ For Dr. Bristowe argues that if the medicines which have been supposed to procure the spontaneous coagulation of the blood in aneurisms really did so there would be a risk that they might produce clots in the vessels or the cavities of the heart and so cause a disease more formidable than the one they are intended to cure. I may add that there is a patient now in St. George's Hospital in whom the symptoms

* Case recently read before the Royal Medical and Chirurgical Society.

† THE LANCET, August 26th, 1871.

‡ The Successful Treatment of Internal Aneurism. London: Churchills. 1864.

§ See the Croonian Lectures for the present year.

of aneurism first showed themselves while he was suffering from lead colic, and in whom iodide of potassium, administered with the view of assisting in the internal treatment of the disease, produced rapid iodism, with no effect on the tumour.

The internal treatment of aneurism is no novelty. The plan has been described very sufficiently by Abernethy;* but the merit of methodising it, of insisting forcibly on its paramount claim to a preliminary trial in internal aneurism before any of the more dangerous methods of treatment are adopted, and, above all, of showing with what success it may be practised, cannot be denied to Mr. Tufnell. Allow me to exhibit this original drawing with which Mr. Tufnell has kindly favoured me, taken from a case (related in his book) three years after the consolidation of a very large aneurism of the arch of the aorta on the right side, where its prominence is still seen, and its effects are also to be traced in the great enlargement of the superficial veins of the chest and abdomen. The man was perfectly well, and following his occupation of an engraver. So strong, indeed, is my sense of the value of this "internal treatment" of aneurism, that I beg, in commencing these lectures on the more properly "surgical" treatment of the disease, to state distinctly that I only regard intrathoracic or abdominal aneurism as a proper subject for such measures on the failure of the internal treatment, which should in every case be the first resource of the practitioner, even in those where the abdominal aorta is amenable to compression, since such compression cannot be effectually put in force without danger, as we know from instances which have been recently published.

ON THE

EXTINCTION OF TYPHOID FEVER IN THE MILLBANK PRISON BY THE DISUSE OF THAMES WATER.

BY SURGEON-MAJOR A. C. C. DE RENZY,
SANITARY COMMISSIONER, PUNJAB.

THE Millbank Prison was first opened for the reception of convicts in 1816. It is built on the cellular system, each convict having a cell to himself of a cubic capacity of about 900 feet. The number of convicts confined there has ranged from about 600 in the earlier years of occupation to upwards of 1200. For very many years the prison had a bad reputation for unhealthiness. Its inmates from the first suffered a very high rate of mortality; phthisis being the disease most productive of casualties, but epidemics of typhoid fever, diarrhœa, and dysentery were of frequent occurrence. Of the four epidemics of cholera that have visited England, the first three—viz., those of 1833, 1849, and 1853–55—were very fatal in the prison. In the fourth epidemic—that of 1866—the convicts entirely escaped. In the month of August, 1854, the health of the convicts began to exhibit a very marked improvement, which has continued up to the present time. Typhoid fever has become extinct, and diarrhœa and dysentery have ceased for many years to appear as causes of death. Nor has the disappearance of these diseases been followed by the appearance of other causes of death. From the year 1862 to the present time not a single convict has contracted typhoid in the prison. There were only three cases of the disease altogether treated in that interval; but the patients had the disease upon them at the time of admission to the prison. One of these three cases was admitted and proved fatal in 1865. For the next six years there was not a single case of typhoid in the prison. The other two cases were admitted recently from another prison, and are now convalescent.

From August, 1854, to April this year—a period of nearly eighteen years,—there have been only three deaths altogether from typhoid—viz., one in 1855, one in 1860, and one in 1865. As already stated, the last case was an imported one. In the same period of eighteen years there has been only one death from dysentery and diarrhœa.

A change in the health of the prison so sudden, so marked and permanent, is of great interest in relation to some moot questions in preventive medicine; for our knowledge of the circumstances under which the change occurred is so full and precise that we can hardly err in attributing it to its true cause. In preventive medicine it is hardly possible to exaggerate the value of an accurate precise knowledge of the mode in which zymotic diseases spread; for without such light our preventive measures must be empirical, roundabout, and unnecessarily costly.

But it will be well to state, in more detail, the grounds of the assertion that the health of the prisoners has undergone a radical change since 1854. I shall then discuss the cause of the change. The extent and reality of this change will be established by information taken from the reports of two Select Committees of the House of Commons that were appointed to investigate the cause of the sickness in 1822, '23, '24, and by quotations of the opinions of the medical officers of the prison as recorded in their official reports and by official statistics of sickness and mortality.

From the report of the Select Committee of 1823 I find that for some time previous to 1822 the convicts had been subject to an intestinal flux, which the medical officer supposed to be due to overfeeding and insufficient exercise. In consultation with Sir James McGrigor, the head of the Army Medical Department, the managing committee of the prison adopted a reduced dietary. Three months after the introduction of the new dietary a great epidemic of diarrhœa, dysentery, and fever, accompanied with symptoms of scurvy, began. There were nearly 500 convicts sick at one time, out of 880. The opinions of the College of Physicians and of Sir Henry Halford, Sir Gilbert Blane, Drs. Roget and Latham, and other eminent medical men, were taken as to the cause of the epidemic. With the exception of Sir Jas. McGrigor, they were all agreed in thinking that the main cause of the sickness was attributable to the new dietary being insufficiently nutritious, subsidiary causes being the depressing influences incidental to protracted imprisonment on the solitary system, insufficient exercise, defective ventilation, cold, and possibly some influence peculiar to the locality. But, although the diet was improved, a very large amount of sickness continued to prevail; and even convicts who had not been on the reduced diet at all, who were admitted after its abolition, contracted the diarrhœa and fever peculiar to the place. These circumstances led to the opinion that the disease was contagious, and measures of prevention were taken accordingly. Sir Humphry Davy was requested to report on the ventilation of the prison, and Faraday was employed to disinfect it; and every suggestion that the science of the day could offer was availed of. There is no precise information to show when or how the epidemic came to an end, and for many years the sanitary records are extremely meagre, but there is enough to show that the prison continued unhealthy. In 1833 the convicts suffered very severely from cholera. In the Prison Report for 1839 the Inspectors of Prisons are quoted as saying that "these circumstances lead us to regard the situation of the prison as decidedly unhealthy." In 1841 the late Dr. Baly was appointed to the medical charge of the prison, and at his recommendation great alterations were made in the discipline of the prison, and from that time the data available for judging of its sanitary condition are much more ample. In the year 1842 there was a great epidemic of dysentery and fever. At one time there were 110 cases in the infirmary, nearly all being dysentery and fever. In 1847 there was much continued fever—"in the fifteen months ending 31st March, 1849, there was a great increase of sickness and unprecedented mortality," fever and cholera being very fatal. The death-rate for 1849 was 82·23 per 1000. In 1853 and 1854 there were again epidemics of fever and cholera, attended with much mortality. We have now reached the turning point in the history of the prison. In 1855, notwithstanding the occurrence of five deaths from cholera, the death-rate sank to 11·3 per 1000. From that year up to 1870, the highest death-rate was 19·3; it was as low as 3·92 per 1000, and in nine years out of the sixteen it was under 12 per 1000.

* Surgical Observations on Aneurism, eighth edition, 1825, pp. 303-4. I may add that I myself described the plan tolerably fully in the year 1862. (System of Surgery, vol. iii., p. 364, first edition.)

The following table shows, in a concise form, the sanitary state of the prison since 1843:—

Date.	Number of prisoners received.	Average daily number.	Deaths per 100.
1843 ...	1961 ...	741 ...	13
1844 ...	4102 ...	906 ...	18
1845 ...	3523 ...	990 ...	15
1846 ...	3657 ...	998 ...	13
1847 ...	2762 ...	1151 ...	28
1848 ...	3141 ...	1373 ...	53
1849 ...	3047 ...	1053 ...	82
1850 ...	2247 ...	1154 ...	23
1851 ...	2570 ...	1091 ...	18
1852 ...	2351 ...	1202 ...	30
1853 ...	1599 ...	1038 ...	28
1854 ...	1513 ...	752 ...	69
1855 ...	— ...	967 ...	11
1856 ...	2640 ...	928 ...	19
1857 ...	2497 ...	1109 ...	11
1858 ...	2306 ...	1068 ...	8
1859 ...	2234 ...	993 ...	5
1860 ...	2386 ...	1003 ...	8
1861 ...	2496 ...	984 ...	9
1862 ...	2859 ...	1018 ...	3
1863 ...	2584 ...	1013 ...	10
1864 ...	2015 ...	985 ...	18
1865 ...	1851 ...	898 ...	14
1866 ...	1608 ...	918 ...	13
1867 ...	1889 ...	942 ...	18
1868 ...	1502 ...	935 ...	10
1869 ...	1333 ...	1011 ...	13
1870 ...	925 ...	712 ...	15

In studying these statistics it should be remembered that the death-rate of a year depends to a considerable extent on the state of health of the convicts admitted in that time.

In the ten years from 1845 to 1854 there were 57 deaths recorded under the head of typhoid, or 5·7 per annum, and there was no year without a death from typhoid. In the eighteen years from 1855 to 1872 there were altogether 3 deaths from typhoid, and in fifteen years of the period there was no typhoid death at all. In the twelve years from 1843 to 1854 inclusive the death-rate was 33 per 1000. In the sixteen years from 1855 to 1870 it was only 12 per 1000.

The reality, extent, and permanence of the change in the health of the prison being thus clearly established, it remains to investigate the cause of this change. The following enumeration of possible causes will probably be considered sufficiently comprehensive as a basis of discussion—viz., improvements in (1) drainage, (2) ventilation, (3) diet, (4) clothing, (5) discipline, (6) water-supply. The observations I have to offer on each of these heads will, I think, prove to demonstration that the cessation of typhoid in the prison was in no degree whatever due to any changes under the first five heads, and that it was due solely and exclusively to the change in the water-supply.

Drainage.—As regards drainage, two improvements have occurred. The prison was formerly surrounded by a wet ditch which communicated with the Thames, and which was believed to render the site damp. The ditch, however, was filled up many years ago, and has not existed within the memory of the present generation; and as fever prevailed in the prison with great intensity from time to time for at least a quarter of a century after the ditch was filled up, we may eliminate this cause as entirely unconnected with the cessation of the disease. Indeed the health of the prison appeared to be steadily deteriorating for some ten or twelve years before the sudden improvement in 1854. The other improvement in drainage was the connexion of the main sewer of the prison with the intercepting sewer of London. This change occurred in 1859; but as the fever had become extinct years before this cause came into operation, we may eliminate it, too, as irrelevant. A few further remarks on the drainage may be of interest. The prison formerly drained direct into the Thames, and the mouth of the sewer, being under the level of high-water mark, was furnished with a sluice to prevent flooding of the drains. Thus the sewage of the prison was kept stagnant in the drains every day for several hours. Occasionally, too, when a fall of rain happened to coincide with an unusually high tide, the basement of the prison was flooded, and the sewer gases forced out into the prison corridors. The drains are well constructed; but, owing to the low position of the prison on the banks of the river, they have very little fall; so that silt accumulates in them rapidly, and they have to be opened out constantly to be cleansed. It appears, too, that the drains have no ventilation whatever. At present they form a long blind end in connexion with the main sewer of London, and I am informed there is no communication of any sort between the general atmosphere and the interior of the prison main drain in the interval between its connexion with the London sewer and the prison waterclosets. The waterclosets, too, on the day of my inspection of the prison were by no means free from offensive smell, and appeared to be insufficiently ventilated. I do not mention these facts for the purpose of contending that typhoid is never caused by bad drainage, but the case appears to show conclusively that perfect immunity from typhoid may co-exist with very indifferent drainage. Some eminent authorities have lately described the water-removal of excreta as necessarily involving serious danger to the public health by favouring the propagation of typhoid, diarrhœa, scarlatina, &c. The facts here recorded may help to moderate such fears. Before leaving the subject of drainage, I would mention that there is not a particle of evidence for supposing that the extinction of typhoid in Millbank was in any way connected with a change in the "ground water." Prof. Pettenkofer's hypothesis is demonstrably inapplicable to this case.

Ventilation.—As regards ventilation, there is little to be said. It is substantially the same as it was when the prison was unhealthy—the same as it was left nearly fifty years ago by Sir Humphry Davy, under whose advice the arrangements for ventilation were carried out. A complaint, indeed, occurs in Dr. Baly's report for 1849, p. 12, "of the prison courts being surrounded on all sides by the buildings, so that the body of air within them, which supplies the cells and wards, is changed with difficulty; and this evil has within the last few years been aggravated by the erection of a long and continuous range of higher houses on the south-west and western sides of the prison, by which the access of the most frequently prevailing winds to the prison is greatly impeded." As this impediment to ventilation, *quantum valeat*, is common to the two states of the prison, it may be eliminated as irrelevant.

Dietary.—The dietary was altered in 1864, but as typhoid had ceased nine years previously there can be no causal relation between the two events. The nutritive value of the diet was reduced, and the solid food allowed per week was reduced from 306 to 284 oz. Long experience proves that the new diet is sufficient to maintain health, but there is no reason to believe that its adoption has made zymotic disease less prevalent.

Clothing.—There has been no change in the clothing.

Discipline.—The discipline was somewhat changed in 1864 in a sense not favourable to health. While the prison was unhealthy the medical officers thought it dangerous to the health of the convicts to carry out the solitary system with the strictness enforced in other prisons, and they recommended that the cell-doors should be left open a few hours each day. But in 1864 the prison had been healthy for so many years that orders were given to have the cell-doors closed all day, as in other prisons, and the practice has been kept up ever since.

Water-supply.—The water-supply was changed on the 10th of August, 1854. Up to that date the prison had been supplied with water pumped from the Thames as it flows by the institution, and purified by filtration. The new source of supply was the artesian well in Trafalgar-square. The change was carried into effect in the midst of the cholera epidemic which so severely visited London that year, and the prison was suffering from cholera at the time. Six days after the change the disease suddenly ceased, and a marked improvement took place in the health of the prison. From the date of the introduction of the new water-supply up to April of the present year—a period of nearly nineteen years—there have been only three deaths from typhoid—viz., one in 1855, one in 1860, and one in 1865. Of these the last occurred in a convict who was suffering from the disease at the time of his admission. In the first part of 1854, and before the change of water-supply, there had been three deaths from fever and two from diarrhœa. In the nineteen years since the change of water-supply there has been only one death from diarrhœa and dysentery. It is thus shown conclusively that the disappearance of

typhoid coincided exactly with the disuse of Thames water, and as this change occurred while in all other respects the sanitary condition of the prison remained unaltered, there can be no doubt the two events were not coincidences only; there must have been a causal relation between them. In further confirmation of this conclusion, I would mention that in the twenty-one years for which we have mortuary statistics for the Pentonville Prison, there has not been a single death from typhoid in that institution. There have been only three deaths from diseases of the bowels, of which all were contracted before the patients were imprisoned. The Pentonville Prison drew its water-supply exclusively, until very recently, from a deep well in the chalk. It has been singularly free from epidemics of every kind and remarkably healthy, its death-rate rarely exceeding 6 per 1000. It has never suffered from cholera, though three epidemics of that disease have visited London since the prison was established in 1843.

(To be concluded.)

ON THE SPIRAL SPRING EXTENDER;

BEING A NEW AND SIMPLE APPARATUS FOR MAKING EXTENSION IN DISEASED JOINTS, ETC.

BY C. HOLTHOUSE, F.R.C.S.,
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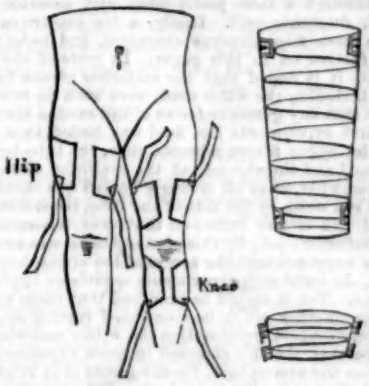
I THINK it desirable to call the attention of the profession to a simple and inexpensive apparatus for making and keeping up any amount of traction on a limb or joint, and without necessarily confining the patient to bed or preventing him from taking exercise. The principle is old, and is illustrated in the Jack-in-the-box of our infant toys, in the spring seats of our chairs and couches, and in numerous weighing machines, &c. Although I designed this in 1868, I did not actually apply it to patients till the present year, being stimulated thereto by the success of the more costly but not more efficient instrument of Mr. Sayre of New York.

My apparatus consists of a simple spiral spring, covered with leather, flannel, or linen, and having two buckles at one or both extremities. When extended, it forms a cylinder closed at the sides but open at each end; and when the coils of the spring are pressed together it approaches in form to a discoid ring or a closed concertina. It need not, however, necessarily be cylindrical, but larger at one end than the other, in conformity with the tapering shape of the limb. It can be made of any length, size, or strength; and the traction-force exerted can be regulated with the utmost exactness; while its cost need not exceed five shillings.

Application of the instrument.—This is extremely simple. If the hip be the joint which it is wished to extend, two square pieces of strong diachylon plaster having a piece of boot-strapping, from six to eight inches in length, fixed to the centre of the lower border of each, should be applied to the upper half of the thigh, one on each side. The plasters should be sufficiently large to surround, or nearly so, the circumference of the limb, and should be applied evenly by their whole surface; for further security they may be surrounded by a roller bandage applied in the ordinary manner. Over the limb thus prepared, the cylinder, previously compressed, is slipped, the foot, of course, being extended as in pulling on a boot, and it is drawn up the limb till its larger end is supported by the perineum; this serves as its fulcrum. The tapes on the plaster being now buckled to the lower end of the cylinder, it will be obvious that any amount of traction on the hip-joint may be obtained, according as it is buckled tightly or loosely; the first will, of course, approximate the rings of the cylinder, and so increase the traction of the spring; while, in the latter, the rings being further apart, less force is necessarily brought to bear on the joint. The exact amount of traction-force may always be known by trials made with the cylinder previous to its application, and for convenience the tapes may be divided into inches. If the knee be the joint affected, two buckles must be fixed on the upper end of the cylinder as well as the lower, and the tapes which are attached to the plasters on the thigh must correspond with their upper instead of their lower borders. The plaster must, moreover, encircle the lower instead of the upper half of the thigh. On the leg the tapes must hang downwards, and the plaster be applied just below the knee (see figures).



In some cases it may be advisable to substitute splints for plaster, in which case the two ends of the cylinder may be supported by buttons or hooks on the outer surface of the splints.

Although the spiral spring extender may be most frequently called into requisition in cases of joint disease, it may be employed with advantage in many fractures and dislocations, as well as in excision of joints, when it is desirable to keep the bones asunder. In amputations, especially of the thigh, it is peculiarly eligible where the flaps have been made too short, or have become so by sloughing, the pulling forward of the integuments by this instrument taking off all tension from the sutures, much in the same way as Hainsby's instrument does in cases of hare-lip.

To sum up. The chief merits of this instrument, and its superiority over the weight and pulley, rack and pinion, and other mechanical contrivances for making extension, consist in its great simplicity, cheapness, lightness, and efficiency; the patients being in many cases able to take out-door exercise, and thus avoid the injurious effects of long confinement in bed.

The above have been made for me by Messrs. Mayer and Meltzer, of Great Portland-street.

May 23rd, 1872.

EXPERIMENTAL OBSERVATIONS ON THE APPEARANCE OF THE LOWER FORMS OF LIFE.

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WITHOUT regarding with much complacency the following experiments and observations, or supposing that they can clear up a very dubious question—in fact, without feeling that the experiments have resolved all the doubts in the mind of the writer himself, he still thinks that they may be considered, and that irrespectively of any particular theory, as worthy of record. The first experiments (1), no doubt similar to others which have been often tried, were instituted for the purpose of ascertaining whether suitable animal or vegetable fluids, after being deprived, as was till lately supposed, of all living organisms and also of organic germs by boiling, and afterwards being simply cut off from the access of air, will present, after standing a proper time, any trace of the organisms which would in general have plentifully appeared if they had been unheated and freely exposed to the air. Other experiments (2) follow, in which a portion of air may or must have been present, but, if so,

it must have been pretty strongly heated. In the next experiments (3) the liquid was also, it is believed, in a part of them, entirely shut out from the atmosphere, and in another part a portion of oxygen substituted for air, whilst in both the liquid used was previously submitted to prolonged boiling. In the fourth set of experiments (4) air was admitted, but only through a tube partly filled with asbestos saturated with sulphuric acid. Lastly, a few experiments (5) follow of a more miscellaneous character, and to be particularised further on in this paper. In some of the later experiments it is hoped that the materials chosen for the infusions, including the water used, were such as to render it unlikely that any germs or forms of life existed therein.

In the first experiments the fluid was boiled in a large test-tube for about fifteen minutes, then, the tube being a little inclined and the violence of the ebullition allowed to subside somewhat, olive oil strongly heated was cautiously allowed to run down by the side of the tube, till it formed a stratum of one or two inches on the top of the animal or vegetable infusion used. By this plan explosion was avoided, and it was supposed that the access of the atmosphere was prevented. In eight such experiments organisms appeared; in five, none. Yet it should be premised that these experiments, with another set to be mentioned further on, constituted the strongest presumption the writer met with for the doctrine that the life observed in such experiments is derived from the atmosphere, for the germs of it might, as we see with flies and other light bodies—as vegetable powders, for instance,—have sunk through the oil and so given origin to the life. When the oil was thickened with wax or resin life appeared less commonly, though it did appear in several of the experiments, as will be again alluded to. It may be concluded, however, that life is developed scantily in such closed vessels with entire absence of air, and, in fact, we found that an infusion of hay already abounding in vibrios lost the greater part of its life when so treated. The careful housekeeper, in making her preserves and syrups, is aware of the use of such a sealing by lard or suet, as well as of strong boiling and concentration. The animal life found in these tubes consisted of bacteria, often in the form of dumb-bells or of the figure of 8, and about the 4000th of an inch in length; vibrios of different kinds and sizes, linear, jointed, or spiral, and from the 2000th to the 50th of an inch in length in an infusion of bruised oats, and so long as to stretch across the field of the microscope and also very active in a decoction made from a kidney; and monads and active molecules, of which little can be said and little account has been made. The fluids operated upon were infusions or decoctions of hay, bread, oats, flesh, &c. The vegetable life consisted of interwoven, colourless, jointed filaments, or of pellicles which at first looked like chemical or mechanical formations, but which, after washing in water and ether, were evidently vegetable growths. The filaments in this case were hyaline, tubular, branched, jointed, and sometimes club-shaped at the end, and they were also accompanied by small and a few larger oval corpuscles, sometimes motile. Upon the whole, the lower vegetable forms seemed to appear more freely in liquids so treated than the animal.

The above experiments were mostly made in September, 1870, the liquids being allowed to stand seldom more than two or three weeks before they were examined with a power of from 500 to 1000. Lately we have found that infusion of hay or of flesh, the latter fresh—that is, living and contractile,—made with distilled water from the boiler of an engine working at considerable pressure, or with common, fresh-boiled, distilled water, the glass tube being heated, the operations accomplished in the heat of a strong oven, and, finally, the infusions covered with oil of turpentine, which seems to follow carbolic or sulphurous acid as a destroyer of the forms of life in question,—we have found such infusions to present undoubtedly bacteria and vibriones. The experiments with wax have also been repeated. Thus in a long tube or preparation glass, previously cleaned with sulphuric acid and liquor potassæ, and made hot, was dropped a little juice of meat, some heated sugar, and albumen from a newly laid egg broken for the purpose. The glass was filled with distilled water microscopically pure, and which did not contain animal forms higher than molecules even after being exposed for some days on the warm mantel-piece; finally, hot oil with wax was poured over the liquid, taking care that no opening was formed by the contraction of the wax. It was not long before turbidity and flocculent matter, with the usual animal forms, appeared; and so with a large test-tube, the circumstances being similar, but the relative amount of life less. In a tube containing a solution of acetate of potash and carbonate of ammonia, treated the same way, except that the solution was boiled, the result was the appearance of a few vibrios and of a beaded alga or fungus.

Other experiments (2), allowing we suppose of the access of a little strongly heated air, were made in 1870 and 1871, by merely boiling the fluids in suitable test-tubes, which had been previously drawn out and bent near the middle. In each case the fluid was boiled from ten to fifteen minutes, and the ebullition made to reach to the mouth of the tube; then the spirit-lamp was gradually raised to the narrow part, and its flame kept there till the glass became so softened that the lower cell containing the fluid could be sealed up. On breaking off the ends of these tubes there was sometimes a little report from the rush of air. In two-thirds of the experiments it was found that the fluids, after standing two or three weeks, presented either animal organisms (so called), monads, bacteria, and vibrios, or vegetable torulæ and filaments; but certainly more sparingly than when portions of the same fluid had, *cæteris paribus*, been exposed to the air, or when it had been attempted to exclude foreign bodies by merely plugging the tubes with cotton. Occasionally the liquids used could not be discovered to contain organisms after standing, even when they had not been submitted to heat nor excluded from the air; other circumstances, we suppose, not being favourable—the strength of solution, degree of temperature, amount of light, nature or quantity of fluid, length of time of standing, &c. In a tin of preserved haddock, and in another of Labrador salmon, we could discover no vibrios or bacteria; but in three tins of beef-tea, perfectly good in taste, both were present in the motile state.

In the following experiments (3) there was very severe boiling, and, we think, the exclusion of the atmosphere. In October, 1871, an animal decoction was made, and boiled for four hours in a pneumatic trough; the bottles to be filled, together with their stoppers, being also placed in the trough. Six of the phials were filled with the hot liquid, and various proportions of it displaced by pure oxygen which had been passed over quick-lime; the phials were then stoppered under the liquid and cemented. Four phials were quite filled and then stoppered; a very small vacuum in each soon appearing, but apparently not from the admission of air. Two phials had some air purposely admitted, being afterwards stoppered and cemented; in one the air was allowed to have free access. Two large test-tubes were also partially filled, and then very strongly plugged with cotton-wool, the liquid again boiled for ten and fifteen minutes, the ebullition rising nearly to the plug, and strongly heating it. Upon examination of these two tubes, after standing a week, it was found that in one of them, the liquid having been boiled down to a small quantity, there were only moving molecules or monads, of which little can be said—the liquid had apparently become too concentrated; in the other tube, which gave off a more fetid smell, were bacteria in abundance and various vibrios, some of them peculiar, being very long and sinuous. The phials into which the air had been admitted, more or less freely, also abounded in life. The full bottles contained no vibrios or bacteria, but only moving molecules, constituting the second circumstance above alluded to, from which some would conclude that the germs of the life found in the other experiments were derived from the atmosphere solely. The writer, however, is disposed to believe that their very frequent, though not constant, absence in such a case depends upon the organic matter present in the liquids being prevented from undergoing that chemical change, attended with the absorption of oxygen and the evolution of carbonic acid, which is necessary for putrefaction or fermentation, and for the formation and existence of life, especially of animal life. These full bottles were under similar relations to the tubes containing liquids covered with oil or wax, and therefore the experiments might have been arranged with the first set (1), in which, however, these tubes, which had their contained liquids covered with oil simply, were by no means devoid of life, either from the cause above alluded to, or from the boiled oil acting as a gas-transmitter. We found upon a second trial of the same experiments (3) that of two phials, which were filled, stoppered, and cemented,

one contained vibrios, though they were dead or still, and the other a pellicle at the top, consisting of molecules having movement and all globular under a high power. In five of the phials with oxygen there were undoubted vibrios and bacteria generally abundant; in two, active particles or molecules only. The phials generally gave off a fetid smell; in one or two the oxygen still retained its properties, in the others a match was extinguished. They were generally not decidedly acid or alkaline. The contents were examined at from seven to twenty days. It should also be noted that in these experiments the gas was received immediately from a small retort without using the quick-lime; it was therefore less chemically pure, but more certainly free from atmospheric air. Tubes stopped with plugs of baked cotton corresponded in their products to the last, and to the phials more or less exposed to the influence of the air, one of them presenting beautiful torulæ, like long slender strings of beads.

But if the experiments so far should be considered to show that the access of air is not absolutely necessary for the appearance of organisms as a carrier of animalcules or germs, the question remains—Did not the organisms, or at least their germs, exist as such in the fluids or in one of their constituents from the first, and was the boiling of ten or fifteen minutes, or the boiling of four or five hours in the last experiments, sufficient to destroy them? Respecting germs we can say nothing; but we must concede that moderate boiling is insufficient to disorganise, though it may still or render motionless, when actually present, monads, bacteria, and vibrios: thus bacteria resist boiling of half-an-hour's length. In common bilious diarrhœa it will be found that the dejectamenta swarm with the above minute motile forms, and that by boiling little effect is produced on this motility. The same may be said as to the effects of other strong agents—as galvanism, solution of chloroform, dilute sulphuric acid (1 to 12), solution of common salt, dilute carbolic acid (1 to 60), and dilute sulphurous acid (1 to 60).

At the risk of being guilty of digression, the writer may mention, further, that many years ago he experimented on the powerful effects of common salt upon fresh-water animals, especially in stopping the action of their cilia, and *vice versâ* of fresh water upon salt-water animals. It has, as just observed, little effect on the minute forms of life in question, though higher fresh-water infusoria—Paramecium, Glaucoma, Stylonichia, or Vorticellæ — are immediately killed in a weak solution of it, as well as by the agents named in the last paragraph. In 1867 he described the effects of permanganate of potash, carbolic acid, and creasote on the higher infusoria; also of galvanism as obtained from a small pile of copper, zinc, and paper discs, having platinum electrodes connected with them, and pasted on the microscopical slide,—the galvanic fluid destroying the infusoria and stopping the ciliary action. These agents destroy the movements also of those Navicellæ so abundant in the green film (Colletonema) which forms where water is constantly trickling, as at drinking-fountains, or in impure sewer-water after keeping it some time in bottles. The movements of the remarkable spermatozoa and spermatothecæ of Paludina are destroyed by the vapour of chloroform—and, in fact, by water itself; but in the latter case from endosmosis. Large vibrios are far more destructible than small ones or than bacteria. When chloroform destroys infusoria, it does not appear to disorganise them much, and therefore its application might be useful in their study. We have noticed that when a raceme of barberry flowers is held over a phial of chloroform, the stamens lose their natural motility; and in its vapour, too, the leaflets of the sensitive plant close, the leaves drop, and small plants are even killed by it.

But, to go back a little to the principal subject matter of this paper, it appears that minute organisms are not proof against the action of these agents in a more concentrated state—of carbolic and sulphurous acids, for instance; nor against severe boiling for four or five hours, as shown by Professor Wyman; nor concentration by boiling; and their germs, if they have true germs, would probably be destroyed in the same way. But Professor Wyman further maintains that when a fluid or substance is so cleared of actual or latent life, life cannot again appear. This last conclusion, however, we doubt.

(To be concluded.)

A CASE OF MALIGNANT SMALL-POX.

BY A. D. DUCAT, M.D.

THE following case may not be uninteresting, illustrating as it does the rapidly fatal and plague-like form sometimes assumed by small-pox, and the necessity of revaccinating before the age of twelve (the age at which successful revaccination is paid for under the regulations of the Lords of Her Majesty's Council), when the primary vaccination has not left behind a sufficient number of large and clearly defined cicatrices.

G. H——, a moderately healthy boy, aged twelve years and eight months, and residing at Highbury, was seized on Saturday, May 18th, with headache and sickness. As he had vomited his tea, and kept vomiting the cold water he very eagerly drank, his mother at 9 P.M. got a dose of magnesia and rhubarb for him from a chemist, which he also vomited. He was very restless through the night, and kept groaning and saying he had pains in his head, back, and legs. He seemed so ill that medical relief was sought early on Sunday morning from a neighbouring dispensary, and some medicine obtained which the patient was able to keep on his stomach. Throughout Sunday he ate nothing save a little jam-tart, which, along with two cups of tea, he was able to retain. In the afternoon he got up and dressed himself, but was only able to stay up for an hour. He passed a slightly better night, and on Monday (Whit-Monday) morning his mother, thinking he was merely suffering from a bilious attack, left him at six o'clock to go down some distance into the country. The patient was thus left alone three or four hours, when the father coming in to look after him, found him covered with an eruption. About noon he asked me to see his child, which I did shortly after. The patient (who had not been seen by any medical man till then) complained of violent headache and backache. The sickness had somewhat abated, and he drank eagerly of cold water. His pulse was 130, and of fair strength; the bowels not confined. There was a little blood about the mouth, and the tongue was furred. He was quite conscious, and readily did what he was told. On examining the body hundreds of dark purpuric spots, perfectly distinct from one another, and varying in size from the diameter of a small pin's head to that of a large pea, were seen scattered here and there over trunk and limbs. There was not the slightest trace of the appearance of the ordinary characteristic eruption of small-pox. Occasionally one meets, in the more violent forms of small-pox, with a deep-red eruption (like that seen in severe scarlatina), covering portions of the body, and especially the abdomen; at other times in milder cases you have an eruption like measles, but here there was nothing beyond the purpuric spots I have mentioned, which were not raised above the level of the skin. I ascertained that the patient had been vaccinated when a baby, but the one or two marks which had been left were scarcely discernible. I ordered milk, strong beef-tea, and a mixture containing ammonia, spirit of chloroform, and compound spirit of lavender to be frequently administered, but gave no hope of the child's recovery. He died in less than twelve hours after, retaining his consciousness and power of speech up to the very last.

That this was a case of small-pox of intensely malignant type there can be no doubt. There have been some very severe cases of the disease in this part of my district, and this very lad had been playing about a house where a man lay severely ill with it. His fate may well serve as an additional warning for us not to neglect *the duty of early and thorough revaccination*, especially when we reflect how impossible it is in all cases securely to guard against the chances of infection.

Highbury, May 27th, 1872.

A NOTICE appeared in Wednesday's "Journal Officiel" announcing that the Minister of Agriculture and Commerce had decided that all vessels from Great Britain shall in future be released from the obligation of producing bills of health on entering the channel and ocean ports of France.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

CASES OF STRANGULATED HERNIA.

(Under the care of Mr. SAVORY.)

FOR the notes of the following cases we are indebted to Mr. G. C. Parnell, house-surgeon.

1. M. S——, aged fifty-two, was admitted into the hospital on Dec. 13th, 1871. He has had a reducible inguinal hernia for the last twelve months, and has always worn a truss. Two days before admission he left off wearing his truss, on account of some tenderness about the seat of rupture; consequently the hernia came down, and symptoms of strangulation set in a few hours before admission. He was admitted with an oblique inguinal hernia of the right side, accompanied by well-marked symptoms of strangulation. Taxis was applied, the hernia reduced, and the patient taken into the ward.

Dec. 14th.—Little sleep during the night; much troubled with hiccough; vomited three times. Ordered milk, beef-tea, four ounces of brandy, linseed-meal poultice to the abdomen, and an enema of castor oil.

15th.—Bowels freely open; hiccough ceased; rupture allowed to come down, and immediately reduced. Temperature 99°; pulse fair volume.

16th.—Some good sleep after hypodermic injection of half a grain of morphia; sickness less violent. Ordered twelve ounces of brandy, enema of castor oil, ice, eggs, and five grains of calomel, which was repeated in the evening. Bowels not open.

17th.—Vomiting continued with marked violence through the night. Vomited matter slightly stercoraceous. Temperature 97·5°; pulse weaker; bowels not open. A consultation was held, and it was thought advisable to explore the seat of rupture.—Operation at 7.15 P.M.: Mr. Savory cut in the direction of the right inguinal canal, and opened the sac, which contained neither intestine nor omentum; but attached to the inner side of the canal, high up, was a firm band of fibres, which, being traced into the abdomen, was found to constrict a portion of the intestine. This was divided, and the wound closed.

18th.—Died, exhausted, twenty hours after the operation. At a post-mortem examination the peritoneum was found in a state of diffuse but subacute inflammation, having a focus close to the internal abdominal ring on the right side; at this point the intestines were loosely adherent by a layer of recently effused lymph. The great omentum was healthy, and occupied its natural position. In the inguinal canal a firm, dense, fibrous band was found to have been divided close to the internal abdominal ring; the other end could not be found. It was suggested by Mr. Savory, Mr. Langton, and others, that it might have been attached to the appendix vermiformis. The intestine was found to be perfectly free, and the seat of stricture was three feet above the ileo-cæcal valve. The gut at this point was congested and inflamed, but no destructive changes had taken place either externally or about its mucous layer. The other organs were found to be natural.

2. T. O——, aged forty, was admitted into the hospital on Jan. 11th, 1872, with an indirect inguinal hernia of the right side. In March, 1871, he was operated upon by Mr. Savory for a strangulated inguinal hernia of the same side, which was returned after opening the sac. He made a good recovery. On the day of his admission, the hernia came down whilst he was in bed, during a fit of coughing; and, being unable to return his rupture, he came to the hospital two hours after. The taxis was tried in the surgery and afterwards in a hot bath without success. Two hours after admission he was placed on the operating table, and Mr. Savory cut in a line with the former incision. The tissues were very œdematous. The sac was opened, and a band of omentum was found strangulating the intestine. The omentum and intestine (large) were somewhat congested, and the former was adherent to the sac. The band was divided, and about twelve inches of intestine returned. On examination of the remaining omentum, a hole being found which appeared "as a trap for the intestine to be caught in again," a portion, about the size of the palm of the hand, was therefore removed, a few ligatures applied to the bleeding vessels, and the wound partially closed.

Jan. 12th.—Slept after hypodermic injection of one-sixth of a grain of morphia. Ordered milk and beef-tea. Was sick four times; had abdominal pain. Temperature 101°; pulse 76.

14th.—Sickness ceased; pain less. Temperature 101; bowels open after an injection.

16th.—Bowels open; temperature 100·6°; pulse 72.

18th.—Morphia injections discontinued.

20th.—Had a chop and a little porter. Wound nearly healed.

Feb. 6th.—Left the hospital wearing a truss.

3. A. B——, aged forty-eight, was admitted into the hospital March 6th, 1872. He had had a rupture for the last year, for which he had worn a truss. Whilst in bed, and without his truss, he was seized with a violent fit of coughing, and the rupture came down. A medical man tried taxis under chloroform, but without success, and he then sent him to the hospital.

On his admission, six hours afterwards, he had an inguinal hernia on the right side; the scrotum was very much enlarged, tender, dull to percussion, evidently containing a quantity of fluid, and symptoms of strangulation were well marked. Taxis was tried under chloroform whilst on the operating table for a few minutes, but failing, Mr. Savory operated, and it was found that the seat of stricture did not exist external to the sac. On opening the sac in the usual manner, prior to the introduction of the director, a quantity of dark turbid serum escaped from the small opening made, and the intestine was then returned without further division of the sac. The wound was closed with silver sutures, and a spica bandage put on. He had a grain of solid opium half an hour after the operation, and this was repeated at night. No sickness. Ordered ice to suck.

March 7th.—Ordered milk and beef-tea. Slept fairly; no distress from operation. Temperature 99·5° F.; pulse 72, fair volume. Bowels open freely in the evening.

March 8th.—Slept fairly. Temperature 99·2°; pulse 78. No sickness, but troubled with diarrhœa. Ordered arrow-root and twelve minims of tincture of opium in water, and an injection of acetate of morphia (one-sixth of a grain) at night.

9th.—Slept well. Bowels open; stools solid. Pulse 76; temperature 100°. Appetite good. Has a slight cough; tongue coated with a white fur.

13th.—Cough better. Bowels not having been open since the 9th, an enema of castor oil was ordered, together with a chop and four ounces of wine. Sutures removed, and a bread poultice applied to the wound.

14th.—Ordered full diet.

Since this date he progressed favourably, and was discharged, wearing a truss, on March 30th, 1872.

ST. GEORGE'S HOSPITAL.

OPHTHALMIC OPERATIONS.

(By Mr. BRUDENELL CARTER.)

ON Wednesday, the 22nd ult., we were present in the operating theatre of St. George's and saw Mr. Carter perform the following operations:—

Removal of Eyeball.—The patient was a child, weak and sickly-looking, aged eleven months. The parents had noticed within the last two months an unusual appearance of the pupil, a curious shining metallic look. On examination it was seen that the anterior chamber was obliterated, the iris being pushed forwards by something from behind; and it was clear that there was a growth, most probably of gliomatous nature, filling the eyeball. Mr. Carter drew the attention of those present to the appearance of the pupil, which had, in some cases he had seen in children, led to

the diagnosis of congenital cataract; but one of the proofs that it was not so was the fact that the iris was thrust forwards against the cornea. With regard to the operation, two things were to be attended to. First, the removal of the optic nerve as far back as possible, so as to lessen the probability of the brain being affected; and for this he used a tenotomy knife rather than the ordinary curved scissors. Secondly, the arresting of the free hæmorrhage which is constantly met with in such cases; the central artery is always enlarged, and pours out a full stream which it is difficult to stay; in the present case, where the child was weak, it was of great importance that little blood should be lost; for this purpose he used cotton wool steeped in styptic colloid, and then a good firm pad. On examining the eye after removal it was soft and in no way hard, as might be supposed from the pressure of the growth; this, Mr. Carter said, he had often noticed before, and that it is only when the growth begins to inflame that the eyeball becomes hard. The eye was put into chromic acid for further examination, but the growth is most probably a glioma.

The next two cases were operations for strabismus.

The next patient was a woman aged thirty-five, with a large cicatrix from an ulcer on the left eye; here the cicatricial patch was tattooed with Indian ink, the object being to improve the appearance of the woman. We saw this patient about an hour after in the ward; she complained of some irritation in the eye, but the result seemed excellent.

The next case was one of iridectomy; this patient had some years ago been operated upon for cataract, but inflammation had set in, and the pupil was almost closed with the exception of a small semicircular opening at the upper part; the iris was removed from the lower part so that the pupil will be only a vertical slit.

The last case was an old man suffering from double cataract. Modified linear extraction was performed on both eyes by von Graefe's method, except that Mr. Carter employed a new instrument, the "*pince capsulaire*" of Dr. de Wecker of Paris, to divide the capsule of the lens. This instrument consists of a forceps, much resembling a common iris forceps, and with terminal teeth. Just behind the teeth each blade carries a small fleam-like point, and the two points meet when the blades are closed. The closed instrument is introduced into the eye until it passes beneath the margin of the pupil, on the side opposite the wound; and the points are then made to penetrate the capsule. The blades are next permitted to expand, to a width previously determined by a screw. When expanded, they are drawn towards the operator, and are closed again before they leave the eye, so that the terminal teeth seize and hold the central piece of capsule which the points have detached, and bring it out of the eye. The very thorough opening of the capsule is said by Dr. de Wecker to facilitate the escape of the lens, while the complete removal of the excised piece affords great security against the formation of semi-opaque membranes in the pupil.

GREAT NORTHERN HOSPITAL.

EXCISION OF THE HIP-JOINT.

(Under the care of Mr. GAY.)

WE publish this week two of a series of cases of excision of the hip-joint for disease, which have been under treatment at the Great Northern Hospital during the last six months. For the notes of the cases we are indebted to Mr. Allen, house-surgeon.

1. A. D——, aged seven years, was admitted into the hospital on Sept. 6th, 1871. Family history good. Nine months ago he sprained his right hip whilst playing at "leap-frog." A month later he began to suffer from pain in the knee of that side, and walked a little lame, the right leg appearing slightly longer than the left. In three months the thigh became a little flexed, the pain in the knee continued, and in addition he had pain in the hip. This kept on getting worse and worse till about six weeks ago, when he was obliged to keep his bed. About the same time a swelling appeared on the outer side of the thigh, and has since increased.

He is a pale, anæmic, strumous-looking child, much emaciated. He complains of great pain in his right hip, is unable to walk, and suffers intensely if any attempt is made to move the limb. The thigh is considerably flexed and adducted, is much wasted, and has on its outer side, behind the great trochanter, a large swelling, over which the skin is red, glossy, and œdematous. The distance between the anterior superior spinous process of the ilium and the lower border of the patella, on the right side, is half an inch shorter than that on the left.

Sept. 8th.—The skin over the swelling redder, and much more pain on pressure. Twenty ounces of curdy pus were drawn off by the trocar and cannula, and the puncture covered with collodion.

12th.—The puncture has ulcerated; a free incision was therefore made into the abscess, and about twelve ounces more pus (somewhat offensive) removed, the cavity freely injected with a solution of carbolic acid (1 to 40), and ordered to be repeated daily. Child feverish; great pain in the hip, increased at night.

20th.—The discharge still continues, the pain very severe, and the temperature 102°.

25th.—Another abscess on the inner side of the thigh, which had formed within the last few days, was opened; about four ounces of pus escaped. Temperature 103°.

Oct. 2nd.—Slight discharge from the first abscess, but still a good deal from the second. Temperature about normal. Child eats and drinks fairly.

On the 5th the temperature had risen, and on the 10th another abscess appeared to be forming in the groin; an incision was made into this on the 12th, and about half an ounce of pus escaped.

17th.—Very hectic; appetite bad and getting worse. Sleeps badly. Much pus from sinuses, all of which lead towards the head of the femur and hip-joint, but no bare bone can be felt by the probe.

25th.—Still very hectic. Temperature varies three or four degrees between morning and evening, at night reaching 102°.

Nov. 22nd.—Since the above date the sinuses have continually discharged, and the patient is losing strength. To-day Mr. Gay proceeded (chloroform having been administered) to excise the upper part of the femur. An incision, L-shaped, was made over the great trochanter, and the soft parts freely separated; the head and neck of the bone were thrust out of the wound, and, both being in a very carious condition, were removed by a small saw. The trochanter was found healthy, and was not removed. There seemed to be no acetabular disease. No ligatures were required. The wound was freely swabbed with strong sulphurous acid, and its edges brought together by silver-wire sutures and dressed with sulphurous-acid lotion (1 to 20). The limb was put up on an interrupted Liston's splint.

25th.—Dressing removed; wound healthy; not much discharge. Dressed with carbolic-acid lotion (1 in 40). Temperature 100°. Tongue moist.

27th.—Going on well; beginning to take solid food. Temperature between 99° and 100°.

Dec. 10th.—Health daily improving; wound filling rapidly and looking healthy. Dressing the same. Splint removed, and 4 lb. extension weight and sand-bags substituted.

20th.—Still improving; wound cicatrising; sinuses still discharge a little pus. He is taking cod-liver oil and steel wine.

On Jan. 11th, 1872, the extension was discontinued, and the patient was allowed to get up. He is able to move about on crutches, and to bear a little weight on the affected limb, which has united to the pelvis.

On the 26th he was still improving, using his right leg more. The wound and sinus on the outer side of the thigh were healed. The sinus in the groin remained open, and led to bare bone on the horizontal ramus of the pubis.

March 27th.—Progress during the last four weeks has been uninterrupted; but as the sinus in the groin showed no disposition to close, notwithstanding daily injections of sulphurous-acid lotions, chloroform was given, and an examination made. The pubic ramus, which was bare to a slight extent, was scraped, and some delicate sequestra were broken up by means of a strong iron probe.

On May 8th he was made an out-patient. The sinus in the groin still discharges a little thin serum. No exposed bone can be felt. Right lower extremity about two inches shorter than the left, and somewhat rotated outwards. By the aid of crutches he can go about very quickly.

2. J. C——, aged seven, admitted Jan. 24th, 1872. Four years ago he was knocked down by a horse; three months later he began to complain of pain in the hip, and to walk a little lame. This condition lasted till a year ago, when an abscess formed on the outer side of the thigh, broke about a month after, and has never quite healed. During the last six months there has been intense pain in the hip, and abscesses have successively formed. Within this time the limb has become flexed and considerably adducted. There are three sinuses on the outer side of the thigh, one behind the great trochanter, one in front of it, and one in the groin. All lead towards the joint, and the diseased bone can be felt at the bottom of some of them. The boy's health is much reduced.

Mr. Gay, having made a T-shaped incision over the great trochanter, excised a part of this process, together with the head and neck of the femur, the head having become displaced on the dorsum ilii. The head and neck were carious, and looked like moistened loaf-sugar. In the neck and upper part of the great trochanter was a cavity containing pus and a small sequestrum. The wound was washed out with strong sulphurous acid, the edges brought together by silver-wire sutures, a spica bandage put on over the dressing, and the limb placed between sand-bags. Considerable reactionary fever followed, the tongue becoming furred and the pulse rapid. He was given a rhubarb and calomel purge.

Jan. 26th. — Fever less; bowels freely opened; free discharge of pus from sinuses. An interrupted splint applied.

28th.—Wound dressed with carbolic-acid lotion (1 to 20); it looks healthy; slight extension made on the leg. Sleeps well; bowels regular; appetite improving.

Feb. 1st.—Discharge diminishing. Urine passed last night found to be of a dark colour this morning; an analysis of it by Mr. I. Emsley showed that it contained, in solution, traces of acetic acid, ammonia, sulphides and phosphates of lime and soda, and a large amount of mucus; specific gravity 1030; no sugar.

15th. — Patient steadily progressing and getting quite fat. Extension still kept up; weight employed, 5 lb.

26th.—Wound filling up quickly. As the patient looked somewhat anæmic, he was ordered to take steel wine.

April 5th.—The patient has been continuously progressing during the last month. All the sinuses but one in the groin and one on the front of the thigh have healed, and from these a small quantity of thin, watery pus exudes; wound from the operation rapidly cicatrising; the limb is in a very good position. As he has a comfortable home, he was discharged. He can now walk well with the help of a stick.

SALISBURY INFIRMARY.

TRAUMATIC CATARACT; OPERATION.

(Under the care of Mr. COATES.)

G. B——, aged twenty-two, a footman, was admitted to the infirmary August 29th, 1871. Six weeks ago he received, whilst firing a gun, a blow on the left eye from a portion of the percussion-cap. When first seen by his medical attendant, traumatic cataract had already formed. Soon after Mr. Coates was consulted. The eye was generally inflamed, but there was no pain; he could barely distinguish light from darkness. He was ordered an atropine lotion, and it was advised that, should the inflammation increase, iridectomy and extraction of the lens should be performed.

On admission the eye was much inflamed; loss of vision complete; a portion of opaque lens, the size of a large pin's head, was seen lying in the anterior chamber; the pupil moderately contracted, and occupied by opaque lens and capsule; abnormal tension of the globe is present.

On Sept. 2nd, Mr. Coates performed iridectomy and extracted the lens. The patient had some increased inflammation and pain in the eye the next day, which soon subsided, and he went on well and was discharged on the 9th.

He was seen six weeks after this. The eye was quiet and painless, a portion of opaque capsule still occupied part of the pupil, but there was a good field of vision at the inner and upper part. He was able to distinguish ordinary objects fairly without glasses.

Mr. Coates remarked that in dealing with the case two questions arose: would it be better to simply combat the inflammation and await results, or to relieve the tension of the eye by iridectomy, and at the same time, by removing the lens, give a chance of restoration of vision? He had judged the latter course the better, and by it good results were obtained.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 28TH, 1872.

T. B. CURLING, F.R.S., PRESIDENT, IN THE CHAIR.

ON THE PATHOLOGY OF THE MORBID STATE COMMONLY CALLED CHRONIC BRIGHT'S DISEASE WITH CONTRACTED KIDNEY (ARTERIO-CAPILLARY FIBROSIS).

BY SIR WILLIAM GULL, BART., M.D.,
AND
HENRY G. SUTTON, M.B.

THE authors of this paper commence by stating that Dr. Bright and subsequent pathologists have fully recognised that the granular contracted kidney is usually associated with morbid changes in other organs of the body; and the disease in the kidney and the other coexistent morbid changes are commonly grouped and collectively termed "chronic Bright's disease." It is generally assumed that, in chronic Bright's disease, the kidneys themselves are the organs primarily affected; and, in consequence, a cachexia is induced through which other organs subsequently suffer and undergo chronic changes. The authors consider that the history of the disease does not support this opinion. The morbid changes in the kidneys themselves are first considered, the coarser anatomy being omitted. The microscopical appearances observed in granular contracted kidney are given in detail, and their conclusions on this point are as follows:—The visible morbid changes in granular contracted kidneys are due to the primary formation of a fibroid or hyalin-fibroid substance in the intertubular parts, including the vessels, and to atrophy of the tubular and intratubular structures of the kidney. On this point the authors confirm the observations of Dr. Dickinson and other observers. And they further state that this formation commences in different parts of the kidney, commonly near the surface; but it also seems to commence in the outer coats of the arterioles, and in the walls of the capillary vessels. From these parts it extends round the convoluted tubes and Malpighian bodies. This fibroid or hyalin-fibroid substance subsequently contracts and draws the Malpighian bodies together, compresses the urinary tubules and vessels, and may entirely obliterate them. This thickening of the capillary walls, and the diminished calibre of some of the arterioles, must naturally interfere with the nutrition of the tissues and tend to produce atrophy; and the blood-supply to the secreting cells being in this manner reduced probably causes diminished secretory function and atrophy from diminished use. The alteration in the renal epithelium, when great, is the result of the atrophy; and its slighter changes, such as granular appearance and desquamation of some of its cells, are not peculiar to granular disease of the kidney, such slighter changes being even consequent on the process of dying. The morbid changes in the vascular system are next considered. Dr. Bright and subsequent observers have recognised that atheromatous arterial disease is common with granular contracted kidney. In 1852, Dr. George Johnson, in his work on Kidney Disease, stated that the minute renal arteries are much thickened in chronic Bright's disease, owing to hypertrophy of the muscular coats of the vessels. A few years ago the same writer pointed out that the arterioles, not only in the kidney, but in the skin and other parts of the body, are thickened and their muscular coat hypertrophied in chronic Bright's disease. Sir Wm. Gull and Dr. Sutton describe at considerable length the changes that they have found in the minute arteries and capillaries of the kidneys, pia mater, and other parts; and they state that their observations show that the minute arteries and capillaries are thickened in chronic Bright's disease, and they remark, "we gladly acknowledge the debt the science of medicine

owes to Dr. George Johnson for so distinctly insisting upon this fact." The microscopical observations of Sir Wm. Gull and Dr. Sutton show that the arterioles and capillaries are more or less altered in chronic Bright's disease. This alteration is due to a hyalin-fibroid formation in the walls of the minute arteries, and hyalin-granular change in the corresponding capillaries; that this formation occurs chiefly outside the muscular layer, but it also occurs, but to a less extent, in the tunica intima of some of the arterioles. Further, that the degree in which the affected vessels are altered, and the extent to which the morbid change is diffused over the vascular system of the different organs, vary very much in different cases. The muscular layer of the affected vessel is often atrophied in a variable degree. The authors recognise that some pathologists may consider that the perivascular canals are the seat of these hyalin-fibroid changes. On the existence of such canals they express no opinion, they assert only that the morbid changes are chiefly outside the muscular layer of the arterioles. The arterio-capillary changes observed in chronic Bright's disease are not seen in the vessels of healthy persons who have been accidentally killed or who have died of phthisis and of other diseases not allied to chronic Bright's disease. The condition which induces the vascular change is next considered. Dr. George Johnson states that the general arterial thickening is due to muscular hypertrophy. He considers the blood is impure in consequence of the kidney disease, and the arterioles resist the passage of this impure, more or less noxious blood, and in doing this they become hypertrophied. The left ventricle of the heart, therefore, makes an increased effort to drive on the impure blood, and the result of this antagonism of forces is, that the muscular walls of the arteries and those of the left ventricle of the heart become in an equal degree hypertrophied. This theory Sir William Gull and Dr. Sutton do not accept, for their observations show that arterial changes are not dependent on muscular hypertrophy but on hyalin-fibroid formation. They have found the heart and vessels healthy in cases of chronic disease of the kidneys, and, further, their inquiries show that the cardiac and vascular changes may occur independently of renal disease. Cases given in the appendix to this paper are next alluded to, which show that there is a general morbid state in which the kidneys may be contracted, the heart hypertrophied, and the minute arteries and capillaries altered by a hyalin-fibroid formation. The kidney changes are most often, but by no means always, part and parcel of this morbid state, and their absence shows that the renal changes are not an essential and indispensable part of the general process; but as the vascular system is at some part affected with this hyalin-fibroid change in all the cases, therefore they conclude that the vascular disease is to be regarded as the constant and essential part of this morbid state. The pathology of this hypertrophy of the left ventricle is next considered. Bright considered that the quality of the blood was altered by the kidney disease, and the heart, in consequence, had to contract with greater power to force the morbid blood through the vascular system, and became hypertrophied in order to accomplish this. Many pathologists have adopted Bright's explanation. Dr. Wells, in 1853, suggested that the hypertrophy might be dependent on atheromatous changes in the vessels. Against the explanation offered by Bright and others, the authors state that the frequent association of cardiac hypertrophy and renal disease does not prove that there is a causal relation between these two morbid states. Moreover, that in many cases where there is chronic disease of the kidneys, and the blood therefore presumably impure, the heart is not hypertrophied—instance, large white, lardaceous and scrofulous kidneys, as well as some cases of granular contracted kidneys. Dr. Johnson has endeavoured to account for the absence of the hypertrophy in such cases by assuming that the muscle of the heart is imperfectly nourished. The authors consider this suggestion, and state that this may explain a dilatation disproportionate to the hypertrophy, but it does not explain how a normal-sized heart acquires additional force requisite to overcome the supposed obstruction. Evidence is next brought forward to show that the cardiac hypertrophy is induced by the morbid changes referred to in the vascular system, the heart being found hypertrophied in all the cases in which the vessels were much and generally thickened by hyalin-fibroid change: slightly hypertrophied where the vessels were little thickened; and greatly hypertrophied where the vessels were much thickened, although there might be little or no kidney disease. The hyalin-fibroid change is assumed to impair the elasticity of the vessels, thus imposing upon the left ventricle a necessity to contract with greater force to carry on the circulation. The other conditions which make up the morbid state known as chronic Bright's disease are next noticed—namely, vesicular emphysema, retinitis albuminurica, atrophied brain, contracted spleen, and morbid changes in the intertubular parts of the stomach. In all these conditions it is shown that the arterioles are more or less thickened by fibroid or hyalin-fibroid changes. This general morbid state is shown to belong principally to the period of life at or after forty years of age, and after forty its frequency greatly increases as age advances. It is pointed out that the kidneys, even in children or in other young persons under adult age, are sometimes much contracted and death caused by uræmic poisoning, without the cardio-vascular changes alluded to. But the general hyalin-fibroid change in the vessels may occur in early life; and, in proof, the case of a girl aged nine years is mentioned, where the kidneys were granular and very contracted, the heart hypertrophied, and there were hyalin-fibroid changes in the arterioles of the pia mater.

The authors desire to show that in the state known as chronic Bright's disease with contracted kidney, the morbid changes described do not arise in a constant order. In some cases the changes seem to commence in the kidneys or in the heart, sometimes in the lungs or in the brain, or in other organs; hence the symptom of the disease varies very much in different cases. In all cases, whether many or few organs are affected, the minute arteries and capillaries are altered by hyalin-fibroid formation, attended with atrophy of the adjacent textures. The authors cannot regard the functional disturbances which occur in many organs during chronic Bright's disease with contracted kidney as dependent on blood changes only or chiefly—as, for instance, pain in the head, discomfort after food, palpitation, dry skin, epistaxis, &c. These are probably due not so much to changes in the blood as to changes in the tissues themselves.

The conclusions arrived at in the paper may be briefly summed up as follows:—1. There is a diseased state characterised by hyalin-fibroid formation in the arterioles and capillaries. 2. This morbid change is attended with atrophy of the adjacent tissues. 3. It is probable that this morbid change commonly begins in the kidney, but there is evidence of its beginning primarily in other organs. 4. The contraction and atrophy of the kidney are but part and parcel of the general morbid change. 5. The kidneys may be but little, if at all, affected, whilst the morbid change is far advanced in other organs. 6. This morbid change in the arterioles and capillaries is the primary and essential condition of the morbid state called chronic Bright's disease with contracted kidney. 7. The clinical history varies according to the organs primarily and chiefly affected. 8. In the present state of our knowledge we cannot refer the vascular changes to an antecedent change in the blood due to defective renal excretion. 9. The kidneys may undergo extreme degenerative changes without being attended by the cardio-vascular and other lesions characteristic of the condition known as chronic Bright's disease. 10. The morbid state under discussion is allied with the conditions of old age, and its area may be said hypothetically to correspond to the "area vasculosa." 11. The changes, though allied with senile alterations, are probably due to distinct causes not yet ascertained.

Dr. BROADBENT commenced the discussion by avowing his intention to confine himself to the question as to the nature of the changes in the minute arteries. Sir William Gull, Dr. G. Johnson, and Dr. Sutton were agreed that in contracted granular disease of the kidney there was hypertrophy of the heart and thickening of the arterioles, and that the cardiac hypertrophy was a true muscular hypertrophy due to changes in the arteries. But these physicians differed as to the character of the thickening of the arterial walls, and as to its mode of production. Dr. Johnson believes it to be true hypertrophy of the muscular coat, caused by overwork in resisting the passage of impure blood. Sir Wm. Gull and Dr. Sutton record their belief that it is a

degenerative change in the tunica adventitia, the causation of which is unexplained. The ultimate appeal was naturally to the microscope, and Dr. Broadbent did not pretend to have traced the history and progress of the changes as closely as the authors. But he was so firmly convinced as to the existence of hypertrophy of the muscular coats of the walls of the minute arteries that, if compelled to relinquish this belief after what he had seen, he should cease to credit the existence of muscular fibre at all in the walls of normal arteries, for the appearances were identical in kind, differing only in degree. He proceeded to canvass the arguments advanced in support of Dr. Johnson's theory. That the cardio-vascular hypertrophy is not usual in other forms of diseased kidney, and has therefore some other cause than renal disease, and consequent deterioration of the blood, to be valid, involves the assumption that the effects in the blood are identical in all affections of the kidney. It is not sufficient that the blood is rendered impure, because one sort of impurity may, and another may not, provoke vascular resistance. But it is obvious that the deterioration of the blood in granulated contracted kidney cannot be the same as in waxy kidney. In one, the urine is abundant, pale, of low specific gravity, and contains little albumen; in the other, it is scanty, with colouring-matter present in the usual proportions, more albumen, and higher specific gravity. The blood cannot, as a mere matter of subtraction, be in the same state, to say nothing of the less tangible but more important distinction which the differential characteristics of the urine indicate. In large kidney, too, the course of the disease is shorter, and hypertrophy requires time. Scrofulous kidney is attended with suppuration, which latter condition is associated with vascular relaxation. And, after all, the forms of renal disease other than contracted granular kidney are not uncommonly attended with arterial tension and thickening and cardiac hypertrophy, and this is only to be explained by Dr. Johnson's theory. The second objection, that the cardio-vascular changes are not constant in contracted granular kidney, again, is of no great weight, for exceptional cases are very rare, and absolute uniformity cannot be expected in conditions so complicated. The general vascular change indicated in the views of Sir Wm. Gull and Dr. Sutton is not consistent with Dr. Johnson's theory, as the former imply arterial resistance and consequent hypertrophy intermediate between the renal disease and the hypertrophy of the heart. The vascular changes, indeed, need not be proportionate to the degree of kidney disease, since a long-continued slight amount of kidney mischief may cause greater vascular hypertrophy than a more rapid and complete degeneration of their organs. And with reference to Dr. Johnson's theory that the change in the arterioles is hypertrophy of their muscular fibre, which latter is induced by long-sustained resistance to the passage of impure blood, manifested clinically by high arterial tension, we ought occasionally to have the vascular change and cardiac hypertrophy independent of, or antecedent to, renal degeneration. In the gouty condition, for example, long recognised as a cause of contracted granular kidney, there is frequently, if not always, increased arterial tension, and, therefore, vascular resistance, with no indication in the urine of kidney changes. It must be remembered that the arterial tension comes and goes, so that it cannot be attributed to hyalin-fibroid degeneration. If, as the views of the authors indicate, the thickening of the walls of the arterioles is degenerative in character, the latter must be converted into unyielding tubes, and it is indeed in this way that the cardiac hypertrophy is said to be induced, and they cannot therefore be influenced by any of the causes which contract or dilate the vessels, and so there can be no variation in the character of the pulse other than as is due to the greater or less frequency and more or less force of the heart's action. What are the facts? Pyrexia is clinically known to relax the arteries and lower vascular tension. It does so in Bright's disease, and the speaker's attention was particularly called to the fact (frequently indeed since) by the character of the pulse and the interesting modifications in the sounds of the heart shown by Dr. Sibson to be due to high arterial tension in a case which the post-mortem examination showed to be one of contracted kidney. He continually made use of the fact in clinical teaching, and, on one occasion, having arrived at the bedside and described the distinguishing peculiarities of the pulse, he found that this had entirely disappeared: the pulse was soft, the vessels relaxed as in ordinary pyrexia, and, in effect, the temperature was high, and the patient passing through an attack of pyrexia, on subsidence of which the arterial tension returned. It is well known that the effect of nitrite of amyl is to relax the arteries and to lower the vascular tension, and Dr. Broadbent experimented with it in a case of Bright's disease. If these vessels were thickened by a degenerated hyalin-fibroid deposit, it is obvious that no result could follow; but the speaker was enabled to exhibit a sphygmographic tracing, taken by Dr. Handfield Jones, showing that, whereas before inhalation the trace presented a convex rise, a round summit, a partial fall, and a vibrating slope to the lowest point (unmistakable indications of high arterial tension), after inhalation the height of the trace was more than doubled, the rise was concave, the apex pointed, the fall precipitate, and there was marked dicrotism, and, in fact, the tension was exchanged for complete dilatation. Dr. Broadbent, therefore, felt it impossible to accept the conclusion arrived at by the authors, and his conviction remained unshaken that Dr. Johnson's theory was one of the most comprehensive and interesting links between physiology and medicine.

Dr. GEORGE JOHNSON said that the interest of the subject obviously centred in the question as to what is the nature of the thickening of the walls of the minute arteries in the kidney and in most of the tissues in chronic Bright's disease. He maintained that the thickening was a genuine hypertrophy of the muscular coats of the artery, while the authors denied the existence of hypertrophy, and declared that a hyalin-fibroid degeneration external to the muscular coat constituted the essential change. An appeal to actual specimens must decide the question. He invited attention to those on the table, which had been declared to be examples of hypertrophy by many men, including Dr. Sharpey, Dr. Carpenter, Sir James Paget, and Dr. Rutherford. He was surprised to find that the authors had not produced their specimens, and he maintained that degeneration of the muscular coat of an artery must impair its contractile power, and therefore lessen its stop-cock action. Hence the high arterial tension and the cardiac hypertrophy could not be explained on the theory of arterial degeneration. With reference to this point, Dr. Broadbent's experiment with nitrite of amyl was of great interest. He had specimens of arteries whose walls had undergone the so-called waxy degeneration, showing the canals irregularly dilated in consequence of their diminished power of resisting the blood-pressure. In opposition to Sir W. Gull and Dr. Sutton, he stated that the renal degeneration commences in the glandular structures, and not in the arteries; and that, with the exception of the Malpighian capillaries, the walls of the capillaries in all the tissues were entirely unaffected, and the walls of the veins also were free from structural change. Hence the statement that the area of the morbid change is that of the area vasculosa is inaccurate. The same hypertrophy of the arterial walls occurs in the large white as in the contracted kidney, and he failed to see how the authors explain this in their theory that atrophy of tissues results from the primary vascular changes. The authors gave no explanation of the assumed primary degeneration of the arteries, whereas the speaker's explanation of the various forms of renal disease, with the resulting cardiac and arterial hypertrophy, was physiologically complete and intelligible. In the absence of specimens, it was difficult to give any positive opinion as to the nature of the so-called hyalin-fibroid degeneration described by the authors; but judging from the description of the change as occurring in a hyalin form external to the muscular coat of the artery, and from the appearance of the drawings, he ventured to suggest that they described as pathological that swollen and translucent appearance of the tunica adventitia so commonly produced by the imbibition of fluid, especially when that fluid is mixed with glycerine or dilute acetic acid. This appearance is readily produced in the normal arteries of the pia mater, and may be seen in the minute arteries of the skin and mucous membranes. If these were not the appearances described and figured in the hyalin-fibroid degeneration, the speaker could not say to what the description applied until he had examined the authors' specimens.

Dr. SILVER remarked that undoubtedly there were other modes of origin of contracted kidney, connected with

the tubular epithelium and the intertubular connective tissue. But with relation to the atrophy, the symptoms produced were excess of urine of low specific gravity, and containing little albumen, and he thought that the theory, especially as it applied to the heart, did not help to explain the matter. As to the urine, it was peculiar, being neither blood, serum, nor urine, and while it contained little of the elements of urine it also contained little albumen. The filtering apparatus remained tolerably sound, otherwise more albumen would be present; but the amount of fluid filtered through served to show that the process went on under great blood-pressure, although enough urea was not got rid of. So the patient had little risk of dropsy, but great risk of uræmic convulsions, or of inflammation of the serous membranes. These probabilities showed that urea was formed, and it was known that crystals of urea had been seen on the skin of a patient in an advanced stage of the disease. Life, however, could not be maintained unless the urea was carried off. It was necessary, therefore, to increase the pressure, and the hypertrophied left ventricle showed that this was done; and as the speaker did not believe that the hypertrophy was immediately due to the contracted kidney, so also he could not believe that it was due to the presence of any irritant in the blood. This was not the hypertrophy of a damaged organ, but hypertrophy due to blood under higher pressure. To increase tension resistance in the arteries was necessary, and he suggested that that might explain the muscular thickening of the vessels. So he had given ergot in a case of chronic Bright's disease, which, as is well known, would act on the muscular coat of the vessels, cause them to contract, and so increase the pressure of blood in the kidney. The result was that the patient's urine increased from twelve to upwards of one hundred ounces, but in other cases the increase was less marked. He doubted whether, on the whole, this new theory helped much to elucidate the phenomena of the disease.

Mr. BRUDENELL CARTER said the authors of the paper had referred to albuminuric retinitis, and that the history of this condition was calculated to support their general conclusions. The changes in the retina were once supposed to be pathognomonic of albuminuria, but it was now known that they might be present without that symptom. Again, there was no constant relation between the retinal and the renal affections. In many cases of Bright's disease the retina escaped for a long period; in some it escaped altogether. In many others, on the contrary, the troubled retina was the cause of the patient's seeking advice; and the ophthalmoscopic examination first led to the discovery of albumen in the urine. The retinal changes, again, differed greatly in different instances—the white patches sometimes preceding, sometimes following, the characteristic hæmorrhages. On the whole, the weight of evidence was opposed to the supposition that the retinal was an effect of the renal disorder, and was in favour of the supposition that both were the effects of some more general cause, and that each, for a certain time at least, might exist independently of the other.

Dr. ANSTIE wished to ask Dr. Broadbent whether he was aware of the extent to which the muscular tissue of the arterioles remained sufficiently intact to be sensible of the action of nitrite of amyl, even in very advanced states of degeneration. He (Dr. Anstie) had had occasion to try the effects of amyl in many patients in whom the arterioles must have been extremely degenerated by the effects of old age; nevertheless, the usual sudden dilatation was well marked—indeed, alarmingly so.

Mr. HULKE said that he had found in the retina (associated with albuminuria) true muscular hypertrophy of the arteries, and also true sclerosis—two conditions perfectly distinct, but sometimes commingled—i.e., hypertrophy followed by sclerosis. He asked what relation the authors had found between the arterial changes and the grave alterations in the nervous tissue characterising (in kidney disease) the albuminuric retinitis.

Dr. RUTHERFORD stated his conviction that an examination of the microscopic specimens exhibited by Dr. Johnson was sufficient to satisfy any impartial observer that there is a positive increase in the number of muscular fibres in the walls of the vessel. He regretted the absence of microscopic specimens in connexion with the authors' paper; but observed that it was competent for them to point out in Dr. Johnson's preparations the appearances indicative of hyalin-fibroid as well as the results of the so-called capillary fibrosis.

Dr. SYMES THOMPSON briefly subscribed his belief in Dr. Johnson's views.

Sir WILLIAM GULL, in replying, remarked that the subject was important as to its bearing upon mortality at a certain period of life. The state called chronic Bright's disease with contracted kidney was a mode of death comprising a large percentage of cases, especially in males, after the middle period of life. When visiting Bath a few years ago the attention of the speaker was directed to the tablets on the walls of the Abbey Church, recording the deaths of persons who had come from many parts of the kingdom for the benefit of the waters. Deaths recorded on the tablets near him ranged from fifty-seven to sixty-three, and from later knowledge he did not doubt that nearly all these patients had gone to Bath for what is commonly termed latent or suppressed gout, or, in other words, for symptoms depending upon the state of cardio-vascular degeneration then under discussion. Hence the Bath waters had been humorously characterised as well calculated to lay the dust. But the object of the paper was important in a therapeutic sense. The somewhat antithetical views set forth in the paper deserved, and must receive, the fullest discussion, whether the affection began, according to former pathologists, locally in the kidney, and so, by extension of morbid influence through the blood, producing a change in the heart and arteries, or whether the disease had, as it was now attempted to show, a more general beginning in the arterioles, the kidneys becoming contracted as a part of the general morbid change. Dr. Broadbent's argument that the cardiac and vascular changes might be limited to one form of renal disease, and not producible by other forms of kidney degeneration, was at present an hypothesis only, and not supported by the fact that extreme contraction and degeneration of the kidneys in young persons did not produce the cardiac and vascular changes which on such supposition should occur with it. Dr. Bastian and Dr. Dickinson gave clinical evidence supporting the views advocated in the paper; the former pointedly stated that dyspnœa was one of the early symptoms, and the latter said that in the early stage of the disease the urine is free both from albumen and casts. The clinical history of chronic Bright's disease, though not included in this paper, seemed distinctly to show that the renal affection may be developed at different stages of the disease. Sir William Gull concluded by saying that it had long been a dream of the authors of this paper that the lines of pathological change in later life, so far as they were essential in contradistinction to merely accidental influences, would be found to correspond with the lines of early development. Chronic Bright's disease with contracted kidney appeared to the writers of the paper to belong to the area vasculosa. Had there been time, it might have been possible to point out how the mucous layer and skin had its senile pathology corresponding to the mucous layer of the embryo, and so probably had the nervous layer. He also wished emphatically to record that his colleague, Dr. Sutton, must properly claim whatever credit was due with reference to the morbid anatomy of the subject.

Dr. SUTTON, in reply, said that he should be glad to show the specimens, and would have done so before the meeting had he been apprised of Dr. Johnson's demonstrations. He did not agree with Dr. Johnson's opinion that the changes observed in the vessels were dependent on some incidental and not upon a diseased condition, for a great number of specimens prepared in the same manner had been examined, and the vessels taken from persons accidentally killed, or who had died from tuberculosis, fever, or other acute diseases, did not present this hyalin-fibroid appearance, which showed the condition to be a morbid one. Where the vessels had undergone the hyalin-fibroid change, the kidneys were found diseased, or there were cardiac hypertrophy and the other morbid conditions commonly found in chronic Bright's disease. He thought that the thickening of the arterioles was not dependent on muscular hypertrophy, and was supported in this view by other observers. Bader and Pagenstecker had studied the changes which the retinal arterioles undergo in chronic Bright's disease, and had concluded that the alteration was due to fibroid formation in the tunica intima and the tunica adventitia of the vessels.

At the conclusion of the meeting, Mr. JOHN WOOD exhi-

bited a patient upon whom he had performed the operation of remote transplantation of a large patch of skin from the abdomen to the forearm and wrist, to remedy the contraction caused by a severe burn, which had drawn the fingers backwards nearly up to the elbow.

Reviews and Notices of Books.

Air and Rain: the beginnings of a Chemical Climatology. By R. ANGUS SMITH, F.R.S. pp. 600. London: Longmans.

[FIRST NOTICE.]

IT is scarcely possible to speak too highly of the labours of Dr. Angus Smith, or of the value of his observations on air and rain. The discovery of oxygen and of its relation to respiration led to the supposition that the purity of the atmosphere depended on the quantity. But this idea was dissipated by chemical analysis, which seemed to show that no air contained more than 21 per cent., and none contained much less. It remained for modern chemists to refine; and it is to Regnault that we owe the commencement of an investigation now greatly extended by Dr. Angus Smith, which is destined, we believe, to play an important *rôle* in the pathology and treatment of disease and in the administration of sanitary law. Dr. Smith not only tells us that the air of mountains and plains differs from that of towns and dwelling-rooms, but he shows us exactly in what that difference consists. The sea air on the coast of Scotland contains 20·999 per cent. of oxygen; that of a suburb of Manchester on a wet day, 20·9800; the same on a dry day, 20·947; in Manchester, during fog and frost, 20·910; whilst in a sitting-room the quantity is reduced to 20·89; in the pit of a theatre, to 20·74; in the Court of Queen's Bench, to 20·65; and in the sumpt of a mine, to 20·1400. Though the differences are minute, they are definite. Wherever air is breathed, there is a diminution of oxygen and an increase of carbonic acid. In no condition is carbonic acid altogether absent. In the pure air of the Highlands it forms 0·033 per cent., whilst in the most impure mine in Cornwall it rose to 2·50 per cent. Dr. Smith observes that the difference between 20·980 and 20·999 —namely, 190 in a million—does not appear to be considerable; but if the oxygen is replaced by impurity it really is so. In the case of water, the addition of impure organic matter to a similar extent would give 13·3 grains of impurity in a gallon, or enough to poison those who drank only a small quantity. We take into our lungs from 1000 to 2000 gallons of air daily, and the impurity is conveyed directly into the blood; we ought not to be surprised, therefore, if the inspiration of 13 grains of impurity daily, or half a grain per hour, is very hurtful. But this difference is often much more considerable. In a million parts of the air of a theatre there is a diminution of 2590 parts of oxygen; and as much impurity is there inspired during one hour as would be taken in during fourteen hours in the street. The effect of rain is to dissolve or wash out the carbonic acid, but after rain the oxygen is greater than before. The fact probably is, that rain makes an exchange —absorbing the one and giving out the other.

Dr. Angus Smith presents us with a most interesting summary of the history of the analysis of atmospheric air. It is to Cavendish that we owe the first approach to accuracy; but now, so great is the perfection of analysis, errors have gone down from six per cent. to the second place of decimals. For further information we must refer our readers to the work itself; it will be sufficient for us to say that pure air may now be said to consist of 20·999 per cent. of oxygen, 0·033 per cent. of carbonic acid, and the rest nitrogen. There are, however, numerous deviations from this standard. Thus the air of the highest mountains contains more carbonic acid, less oxygen, and less organic matter than the air of plains, which contains more oxygen, less carbonic acid, and more organic matter. It may be interesting to inquire if the diminished volume of oxygen is due to any change of form, since no one who has experience of mountain air will doubt its invigorating qualities.

The air of impure places is universally characterised by a diminished quantity of oxygen. The air of a closet or midden contained only an average of 20·70 per cent., whilst the air of the street contained 20·943. In the open spaces of London the proportion of oxygen is 20·950 per cent. In the eastern and crowded districts it is 20·857. In the Metropolitan Railway tunnel it is only 20·70. In the middle of Hyde-park the air is particularly pure, and was found to contain 21·00 per cent. of oxygen. The air contains the largest quantity of oxygen after rain, and the smallest in dull, foggy weather. The senses seem to estimate a difference of only 0·07 per cent., but it is probable that they estimate the impurities produced rather than the loss of oxygen. During a visit to London Dr. Smith analysed the air of a law court. One specimen had 20·65 per cent. of oxygen, and a second, taken from the lantern, only 20·490 per cent. He says deliberately that the air of this court was worse than that of the middens of Manchester. No such loss of oxygen was found in any factory in Manchester, or in any other inhabited place above ground during the day. To find air similarly degraded it is necessary to descend the shaft of mines, where the deterioration is the same. There seems little hope for miners whilst judges are content to work in the same sort of atmosphere.

A Manual of Chemical Physiology, including its Points of Contact with Pathology. By J. L. W. THUDICHUM, M.D. pp. 195. Longmans, 1872.

IN the preface to this work Dr. Thudichum states that the first sixty pages have been written as an introduction to his "Researches intended to promote an improved Chemical Identification of Diseases," published in several numbers of the Annual Report of the Medical Officer of the Privy Council; and that it is a complete but concise epitome of that branch of science commonly termed physiological or animal chemistry. The second part is an analytical guide for the use of those who desire to make themselves practically acquainted with the phenomena and constituents of animal bodies. These statements sufficiently express the scope and objects of his treatise. The notices—necessarily brief—of the various organic compounds mentioned seem to us carefully and correctly drawn up, without any attempt to dogmatise. Thus, speaking of glycogen, after giving its chemical and physical characters, Dr. Thudichum remarks that many attempts have been made to explain the source and destination of this matter, but as yet without any very complete success; he himself thinks it may be formed coincidently from starchy and albuminous substances. Referring then to diabetes, he observes that there is at present neither a plausible theory nor a rational treatment of this disease. He attributes the acidity of gastric juice to the presence of hydrochloric and lactic acids, and considers that the sodium hydroxide, being in excess in the mucous membrane, prevents the action of the acid upon it. The two parts of the work mutually explain and complete each other. Thus, in the introductory part, the subject of the Bile is considered in its general relations—as its quantity, constituents, and changes in the body, normally and in disease; in the second part its qualitative and systematic analysis is given, with the characters of bilifuscin, bilirubin, or cholophæin, &c.; in many instances the spectrum is given. It is a useful little book.

THE LANCET.

LONDON: SATURDAY, JUNE 8, 1872.

IN our remarks, last week, on the recent debate at the College of Physicians, we scrupulously avoided any infraction of the "private and confidential" character of the paper of recommendations or instructions to the Committee of Reference. However unnecessary and ill-judged we might consider that the President's ruling had been, it seemed clear that the Fellows were bound not to publish these recommendations at present. A contemporary, however, was less reticent; and by this time no part of the scheme is a secret. We have obtained from the College of Surgeons full information as to the paper of recommendations, which will be found condensed and analysed in another column. It will be seen that there are many points of the greatest importance, and which the profession cannot too soon take into its earnest consideration.

It will be recollected that, from the first, we expressed grave distrust of the capacity of the College of Physicians and the College of Surgeons (or rather of that minority of extra-conservative persons who practically rule the proceedings of those bodies) to devise any scheme of examination which should be liberal enough to satisfy the profession at large, and at the same time should properly represent the advanced science of the day. When the Universities consented to join in the scheme there seemed more hope that it might prove worthy of the profession; but the result, so far, has not confirmed that hope. Among the recommendations by which the Joint Committee of the Colleges has sought to shape the proceedings of the Committee of Reference there is perhaps none more singular than the proposal that the subject of Physiology be taken partly by the examiners in Anatomy and partly by the examiners in Chemistry; which evidently proceeds on the view that Physiology is a kind of mixture of Histology and Organic Chemistry. Can anything more completely barbarous and retrograde be imagined than such an idea of the nature of Physiology? The gentlemen who propounded it can have no conception of the present state of this department of knowledge. One would think they never heard of—they surely can never have seen—the physiological laboratories of Germany; and they must be in lamentable ignorance of the general direction in which the best teachers and investigators of this subject are progressing. We venture to say that those who best know the present state of Physiology would unanimously agree that it would be better to make no pretence of requiring physiological knowledge from the student at all than for the central examining authority of the kingdom to hold up such an unworthy conception of the subject before his eyes.

Again, what a monstrous proposition is it, at the present day, that there should be no separate examination in Forensic Medicine! Actually, the only provision which is made under this head is, that the Chemistry examiners are to be instructed to put questions on the analysis for poisons. It is obvious that this is precisely the part of Forensic Medicine in which there is the least need for requiring knowledge from the student, since the business of analysis for poisons must necessarily fall more and more into the hands of chemical experts. But, on the other hand, it would be hardly possible to exaggerate the importance to the average practitioner of a sound general knowledge of the subjects on which medical evidence is required in courts of law; for the absence of such knowledge is constantly bringing discredit on individuals and on the profession generally. It would be enough to condemn the Conjoint Scheme utterly that its provisions should be completely silent as to the whole range of those questions concerning insanity and responsibility, evidence of homicide by violence, evidence of recent parturition, of live-birth, and a dozen more, which it is impossible to study profitably unless they are looked at in a special aspect, and with a view to their bearing on actual cases in legal proceedings. Similarly, the omission of all notice of the subject of Public Health, in a scheme of medical examination propounded at the present day, is a fault which ought in itself to completely deprive that scheme of the support of the profession.

After all, we are not sure that even the defects in those recommendations of the Joint Committee which bear on the range and the standard of examinations are so serious in their character, and in the consequences which they are likely to produce, as are the suggestions which the Committee make as to the functions and powers of the Committee of Reference. We have no wish to throw unfair imputations on the motives of those who are responsible for these recommendations; but it is clear to anyone who reads the scheme that the latter would throw unlimited and absolute powers into the hands of a very small body of men, who would be nearly certain to represent the least progressive elements in the several bodies by which they are respectively elected, and that the temptations to jobbery, corruption, favouritism, and every other undesirable proceeding, would be enormous. It must surely be clear to any unprejudiced person that if any *small* body of men is to be entrusted with these unlimited powers over the appointment of examiners, the sanctioning of places of study, the fixing of fees, and what not, it will only be possible for such a body to obtain the confidence of the profession by being constituted on the principles set forth in THE LANCET Medical Bill—viz., the full representation of *the general body of the profession, and also of the State as guardian of the public interests.* On the other hand, if the Conjoint Scheme is to be carried out, the general bodies of the Colleges and Universities must insist on obtaining an active voice in its management.

THE fate of the Public Health Bill is upon the balance; and it would be a thousand pities if the turning point should be determined against it by professional opposition. There are so many excellent provisions in the Bill, and it contains so much that is calculated to promote sanitary improvement, that we appeal to those who are using their

influence against it to consider whether it is wise to insist upon conditions which the Government have repeatedly declared that they are not disposed to grant. As Dr. Rumsey states, we have occupied a somewhat neutral position on the question of County *versus* Central Inspection; and whilst we have repeatedly stated our conviction that the medical officers of the Poor Law, and indeed the sanitary officers of all districts, will require inspectorial support, we believe that that support can quite as well be rendered by a sufficient staff of Government inspectors as by officers of the same qualifications appointed by county boards. It is not our intention to rediscuss the question; but we may observe, in passing, that the very objection which holds with respect to towns, where there will be a division of sanitary authority between municipal corporations and boards of guardians, would be created on a more extensive scale in counties by the formation of county boards. The Poor-law medical officer would be the servant of two masters—that is, of the guardians for medical relief and of the county board for the registration and prevention of disease.

But to return to the point—viz., the imminent danger of sanitary legislation being postponed to another year by reason of the persistent opposition of gentlemen whose personal views do not happen to coincide with the Government on these minor points. It is not pretended that these views are endorsed by the great body of the profession, or even by the bulk of the Poor-law medical officers. The resolution of the Council of the Poor-law Medical Officers' Association proves that that Association is prepared to recommend its members to undertake the duties of officers of health; and we believe that they are as a body competent to do so with adequate inspectorial support. It is perfectly monstrous that the sympathies of boards of guardians should be enlisted against the Bill by the specious request which has been addressed to them as to whether they desire to have sanitary duties added to their Poor-law labours. There are scores of boards of guardians who would oppose any measure which presents the prospect of increasing immediate expenditure, and they are perfectly willing to leave matters as they are because the confusion of authority is sufficiently great to enable them to neglect their obvious duties with impunity. Such boards would be obliged to take action under Mr. Stansfeld's Bill; and the object of the Bill is less to make a perfect authority than to impose a duty from which there is no reasonable escape.

If the opinion of the guardians had been definitely asked as to whether they would prefer county boards or magistrates as the administrators of sanitary law in their respective parishes and unions, we believe there would have been but one answer—namely, "Let us have no self-elected outsiders to spend our money; we prefer to appoint our own officers and to act ourselves."

The Public Health Bill is, unhappily, in sufficient danger without unnecessary opposition from those who are interested in sanitary reform. It is a sad fact, which we can only deplore, but cannot alter, that the measure does not occupy the position in the Government programme of legislation which its importance deserves. A very heavy responsibility rests upon Mr. Gladstone for placing political questions before the health and lives of the people. It is a farce to give them political freedom whilst we neglect the conditions upon which their happiness and welfare primarily depend. Thousands of lives are being sacrificed annually and the health of millions is being deteriorated, and yet the Public Health Bill is made to give place to the protection of some South-Sea Islanders, or to a fruitless debate on monetary claims—a few millions at the most. We earnestly call upon him to support Mr. Stansfeld in bringing this most useful measure to the front. We have reason to know that there exists every disposition on the part of the House of Commons to facilitate the progress of the Bill, and we appeal to all who are interested in promoting sanitary legislation to sink their differences and to unite in securing the establishment of a definite authority in every district, notwithstanding that it may fail for the moment to meet the requirements of every special case.

Our knowledge of inflammatory processes in arterial tissues and their relation to atheroma and aneurism is of the most obscure and unsatisfactory kind. English pathologists, with very rare exceptions, regard the atheroma of arteries as chronic in its progress and degenerative in its character. It is generally attributed to some defective or impaired nutrition of the arterial tissues associated with age or with some abnormal state of the blood—from syphilis, alcohol, &c. On the other hand, the German pathologists, with a few writers in this country, consider that the atheromatous process in arteries is the result of some form of inflammation, commonly chronic in character. Dr. Moxon has lately called the attention of the profession to the subject in a very suggestive and able article in the sixteenth volume of Guy's Hospital Reports, "On the Nature of Atheroma in the Arteries." Dr. Moxon believes the continental view, which regards this process as truly of an inflammatory kind, to be the correct one. He thinks that an explanation of the misapprehension that prevails on the subject may be found in some such reasons as the following:—The superficial fatty degeneration of the arterial lining membrane, which is unconnected with any other changes in the remaining coats, is easily regarded as of the same nature as that which is more deep-seated and accompanied by such changes. It is forgotten, too, that fatty degeneration is, in some tissue-elements, a normal result of inflammation. The changes which always accompany the fatty deposits are also frequently overlooked or ignored; and, lastly, there are the theoretic considerations as to the non-occurrence of inflammation in non-vascular structures. The failure, says Dr. Moxon, to recognise the identity of the causative process of vivid and of smouldering inflammation has been a main cause of our hitherto overlooking the inflammatory nature of what is roughly called atheroma in this country. Changes of a kind that must be regarded as inflammatory are present in nearly all bad specimens of atheroma. In young subjects such inflammatory changes occur often without atheroma; and it is these that tend to produce aneurisms more than do the atheromatous patches. "The disease that leads to aneurism is the same disease as leads to atheroma"; they are, in fact, alternative results of

this disease of the coats. If the sub-inflammation be acute, the arterial wall may rapidly soften and rupture, and either sudden death or a false aneurism be the result; if less active, the coats soften and yield before the chronic process that produces the atheromatous patch has had time to occur; and if still less acute, we get the products of a fatty, calcareous, or ossific degeneration superadded, as it were, to those which can be readily ascribed to inflammatory changes, such as thickening of the arterial coats.

The author follows up his subject by showing the connexion between inflammation of the arterial tunics, atheroma, and aneurism; and he dwells upon, and accounts for, the relatively greater frequency of the latter affection among soldiers. In fine, Dr. MOXON holds (1) that what is called atheroma of arteries is sub-inflammation of various degrees, of which the lower degrees end in fatty degeneration of the coats, along with the inflammatory products; and (2) that the determining cause of this change is mechanical strain, a general altered nutrition—such as obtains in gout, syphilis, &c.—being regarded in the light of a predisposing cause.

MR. SHIRLEY DEAKIN, the House-Surgeon to the Male Lock Hospital, is well known to have rendered good services to the community in connexion with the Contagious Diseases Acts. He has lately earned another title to public gratitude by appearing before Mr. KNOX at Marlborough-street to call public attention to the proceedings of "certain advertising and bill-distributing practitioners." It appears from Mr. DEAKIN'S statement that there are about thirty persons "improperly practising in certain complaints" in London, besides others in large provincial towns; and that it is the custom of some, at least, among this fraternity to describe themselves in their placards and pamphlets as being connected with the Lock Hospital. Mr. DEAKIN asked Mr. KNOX to inform him of the best way of proceeding against these quacks, and of protecting the public against them. Mr. KNOX expressed his own readiness to assist in diminishing what he conceived to be one of the greatest scandals of the metropolis. There were two ways of proceeding—one under the Act which dealt with unqualified and unlicensed practitioners, and the other by bringing before him all persons found distributing offensive bills; he would send such persons to the Middlesex Sessions for the purpose of ascertaining whether the magistrates would be inclined to second his efforts to abate an increasing nuisance.

The public spirit and sound judgment displayed by Mr. KNOX furnish a remarkable contrast to the apathy and neglect of the Legislature. It is perfectly well known that the quacks who profess to treat diseases of the generative organs are the vilest of their vile fraternity, absolutely ignorant of everything relating to the maladies they undertake to cure, and skilful only in plundering the unhappy dupes who resort to them. It is well known also that they carry on a lucrative trade, since they find the means of advertising largely; and it cannot be doubted that they contribute in no small degree to the prevalence and the far-reaching effects of syphilis. An artisan who contracts disease cannot enter a urinal without seeing advertisements from some of these wretches before his eyes, and it is quite natural that he should seek the aid they offer. He is robbed of his money without being cured of his malady, and is suffered to infect his wife and to beget diseased children without a single word of warning. If our Government intend to dwell eternally in the lofty regions of ballot bills and blundered treaties, surely they might at least delegate to some inferior persons—magistrates, doctors, and such like, people who can perceive moral and social evils, and can write intelligible English, the neglected duty of expanding and developing the law to meet the ever-progressive developments of rascality. In this age of congresses and conferences, the police magistrates of London would do great service to the country if they would hold an annual meeting, and place every year before Parliament a memorandum or report upon any prevailing evils with which they had found themselves unable to deal effectually. Such a document could not fail to hit true blots in our legislative system; and its repeated issue would before long arouse the attention of the country, and would create a demand for much-needed reforms. In such matters as this curse of quackery it is idle to say that people must protect themselves, because the power to do so is only conferred by some amount of knowledge; and the classes who have been suffered to grow up in ignorance may well look to their social superiors to stand between them and the ills to which unassisted ignorance must be a prey. We hope the authorities of the Lock Hospital will take the measures that Mr. KNOX has suggested; and that the Middlesex magistrates will be wise enough to do all in their power to second Mr. KNOX'S efforts.

Medical Annotations.

"Ne quid nimis."

ARMY MEDICAL DEPARTMENT.

MR. ROBERT LAWSON, Inspector-General of Hospitals, being about to retire after a service of thirty-seven years, of which the last five have been in the onerous and important position of principal medical officer at Aldershot, was met in the medical library of the camp by a large number of medical officers of the division, who wished to bid him good-bye. Deputy Inspector-General Watt, addressing Mr. Lawson, said he had been requested by the medical officers of the division to express their regret at his leaving, and to offer him their hearty good wishes on his retirement. It was not given to one in authority to please all, but it must be gratifying to know how unanimous was the present expression of good feeling towards him. They had desired to present him with a substantial and tangible mark of regard, but such he had declined to receive as contrary to the rules and interests of the service. They had intended to inscribe on it their recognition of his uniform official and social courtesy, and their high appreciation of his distinguished scientific and professional attainments.

Mr. Lawson, in reply, said he sincerely valued the expression of good opinion of those of his department with whom he had had the pleasure of serving in the Aldershot Division. He had served many years in the army, both, as they all knew, through good report and through bad report; but he had always had only one object in view, that the public, whose servant he was, should have the full value of his ser-

vices as far as his ability allowed. They were aware that on matters of duty he had been strict, and he hoped impartial; but he trusted he had never forgotten the one essential in harmonious official intercourse—gentlemanly feeling. He had found from experience that no mere strictness and fairness in an administrative officer availed in the long run for good in carrying on duty, if he failed to conciliate and respect the gentlemanly and professional feelings of every one under him. In the changes which were no doubt impending over the department, he would beg, in leaving, to express his opinion that the able and conscientious discharge of professional duty would command greater respect to medical officers than military distinction, and, in the end, secure a higher status for the Army Medical Department in the estimation of the country.

We desire to add a word of our own in reference to Inspector-General Lawson. This officer is well known as a man learned in his profession, and as a truly honest independent worker in the cause of medical science. He has had long and arduous service in most parts of the world, and his experience and practical knowledge have been turned to account in many ways for the benefit of the Government; and very recently, in the position of President of the Ambulance Committee, he has rendered most important aid in reorganising the whole of the equipment connected with hospitals and transport in the field. It says but little for the authorities that an officer like this should retire from the service without possessing the distinction of a C.B.

ELIMINATION OF ALCOHOL FROM THE BODY.

NOTWITHSTANDING the careful researches of Parkes, Dupré, Anstie, and Thudichum on this subject, it does not appear to be quite exhausted. Dr. Subbotin gives the details of a considerable series of experiments he has recently performed on rabbits in the *Zeitschrift für Biologie* (Band vii., Heft 4). The mode of detection of the alcohol he employed was its acetification by chromic acid, or rather by bichromate of potash and sulphuric acid, the quantity being determined by the subsequent estimation of the distilled acetic acid by means of soda solution. The respiration experiments were conducted in an apparatus lent to him by Voit, and constructed on the plan of the large apparatus of Pettenkofer and Voit. Alcohol of the strength of 29 per cent. was injected into the stomach through the exposed œsophagus, and this tube at once ligatured. The results at which he arrived were: That, during the first five hours after the introduction of alcohol into the stomach, a considerable amount escapes by the skin, lungs, and kidneys; that at least twice as much escapes by the lungs and skin as by the kidneys; that the amounts he obtained, showing that from 6·79 to 7·4 per cent. were thus eliminated, were, from various considerations, certainly below the quantities really discharged from the system. These conclusions he arrived at in 1870. Quite recently, however, he instituted another series of experiments, the object of which was mainly to determine for how long a time after ingestion alcohol continued to be excreted by the skin and lungs. In one of these experiments he found that 12·6 per cent. of the alcohol was eliminated in eleven hours and a half through all these channels; in another instance 16 per cent. was eliminated in twenty-four hours, either in the unaltered condition or only changed into aldehyde. Subbotin maintains that alcohol cannot be regarded as in any sense a food, since, under its influence, the metamorphosis of tissue diminishes, the temperature falls, the amount of carbonic acid excreted lessens, and a smaller quantity of urea is discharged. Its action, he thinks, is direct upon the nervous system, effecting a change in the processes of nutrition, and it may also act directly on the blood-corpuscles. He maintains that there is a distinction (too subtle for translation into English) between Nahrungsstoffe, Nahrungsmittel, and Nahrung. "Alcohol," he continues, "which is neither a Nahrungsstoffe nor a Nahrungsmittel, in the ordinary sense of these words, yet plays an important part in the economy of the body, since it is a typical representative of that group of substances characterised by the general name of excitants (Reiz- or Genieссmittel)." Prof. Voit adds a note to the paper, in which he does not appear to agree with Subbotin's views of the *rôle* of alcohol in the system, or quite to understand his distinctions. He calls albumen, fat, water, and salts, Nahrungsstoffe, because they form constituents of the body; but he also includes starch under this term because it can, by its oxidation, preserve the tissues. He does not define or refer to the term Nahrungsmittel, but he agrees with Subbotin in regarding alcohol as a Reiz- or Genieсs-mittel (excitant.)

CHARLES LEVER.

WHEN Lockhart was residing at Weimar he asked his landlady for the address of Goethe, "Goethe," he added, to make himself more explicit, "der grosse Dichter." The good woman was puzzled for a bit, till at last she broke out with, "Ah, Goethe, the Geheimer Rath—now I know whom you mean!" We hope we shall not be suspected of a parallel ignorance if in writing of Charles Lever we think of Lever the Irish physician, rather than Lever the Irish novelist. In the latter capacity, indeed, it would be affectation on our part to profess ignorance of him. Scanty as is the time vouchsafed to medical men for literature proper—superfluous as was Sir Astley Cooper's advice to the profession "not to read much"—what man is there amongst us who has not, as a school-boy, revelled in "Harry Lorrequer," hidden "Charles O'Malley" under his pillow, or even "snatched a fearful joy" from "Tom Burke," purloined from under the Greek Lexicon when the usher's back was turned? Even later in life, when the cares of the world make heavy draughts on the leisure of the practitioner, which of us has not found time to follow our school favourite into those Tyrolese and Italian scenes in which his intellect found pabulum not less congenial than in the wilds of Connemara, or in "that beautiful city called Cork"? Yet again, when the "years that bring the philosophic mind" have also brought severer tastes and soberer indulgences, has not the "later manner" of the novelist ministered to our holiday relaxation, and afforded us in the shrewd remark, the trenchant analysis, the epigrammatic pith of "Cornelius O'Dowd" and "Lord Kilgobbin," a pleasure as superior to that derived from the "Dodd Family" or the "Daltons" as this in turn surpassed our enjoyment of the "Jack Hinton" and "Harry Lorrequer" of school-boy days? It was indeed the glory of Mr. Lever's genius to grow with the growth and strengthen with the strength of a whole generation of readers, so that, unlike Scott or Cooper, or even Thackeray and Dickens, it may be said of him that his sunset was more resplendent than his dawn. But the gratitude which we share with the general public does not represent all our sense of obligation to him. A distinguished graduate in Arts and Medicine of the Universities of Dublin, Cambridge, and Göttingen, he was one of the foremost to encounter the cholera epidemic on its first descent on our shores in 1832, and from his experience as a practitioner on the Derry coast, supplemented as that was by his connexion, as physician, with the British Embassy at Brussels, he formed an estimate of the qualifications, the duties, the services, and the rewards of the profession which has proved of signal assistance to us in the assertion of our

corporate and individual rights. Not only in his numerous novels has he given many apt illustrations of the inadequately appreciated work of the medical man—illustrations in which the practitioner appears in the light of Scott's Gideon Gray, far oftener than in that of Dickens's Jobling, or Lord Lytton's Squills, or Thackeray's Sir Lapin Warren,—but during his editorship of the *Dublin University Magazine*, and more recently in *Blackwood* and the *Pall Mall Gazette*, he has advocated the honour, the good service, and the just meed of our calling in papers which, if collected, would be hailed by the present generation of the profession as an *apologia pro vitâ*. To these we have had occasion from time to time to allude; indeed, it is but a short while ago that we had to thank him for his able and eloquent vindication of the physician's claim to honours reserved too frequently for merit merely civic or political in its tenor. So that while mingling with that of the general public our tribute of regret at the loss of so bright a literary benefactor, we shall add another and a more poignant one for the premature extinction of a true friend to the profession—an ornament to it in his early years and its vindicator to the last.

DR. PETTIGREW ON CIRCULATION.

ON the 31st ult., Dr. Pettigrew delivered the fifth of a course of lectures on "The Physiology of the Circulation in Plants, in the Lower Animals, and in Man." Of absolute rest, the lecturer observed, nature gives us no evidence. All matter, as far as we can ascertain, is ever in movement, not merely in masses as in the planetary spheres, but also molecularly or throughout its most intimate structure. This led him to speak of force as visible and invisible; visible force being that which can be detected by the eye—invisible force that which alike eludes the naked eye and the microscope. He referred at this stage to the so-called Brownonian movements, and to the movements of bacteria, vibrios, the amœba, and cilia, the latter displaying rhythmic movements, which remarkably resemble those of the heart. The visible forces, he remarked, manifested themselves in vessels, pulsatile cavities, and hearts; the invisible force in nutrition and other changes, in absorption and evaporation, in osmosis, capillary attraction, &c. He attached considerable importance to the effect produced on the circulation by the invisible forces, sagely remarking that they are entitled to take precedence of the visible ones, as the circulation can be carried on in plants and in certain animals where neither contractile vessels nor hearts are present. He wished his hearers to keep the invisible forces constantly in view, as there was a tendency to overlook them in the gradual development and differentiation of the visible forces. He gave due prominence to the invisible forces by stating that by much the larger portions of plants and animals consist of fluids varying in density, and that the fluids, &c., taken in by plants and animals as food could only be made to commingle with the original fluids by absorption, evaporation, osmosis, capillarity, &c. This circulation in the tissues has an independent existence, and precedes the general circulation. The blood moves before the heart is formed, and towards that organ instead of away from it. The capillaries have also a circulation of their own; the circulation in these minute vessels going on when the heart has ceased to beat, and sometimes slowing, stopping, and reversing when the heart is beating vigorously. The vessels and heart are therefore to be regarded as auxiliary forces. The invisible forces (absorption, evaporation, osmosis, capillarity, &c.) work at short distances; the visible forces (vessels, pulsatile cavities, hearts, &c.) at long distances—indeed, the visible forces are only employed when the animal has attained a certain degree of differentiation; the invisible forces being employed equally in the lowest and highest. The lecturer drew a parallel between the circulation in the plant and leech, and showed that in both the circulation consisted of ascending, descending, and transverse currents. The circulation of the leech differs from that of the plant in being carried on to a great extent by the rhythmical opening and closing of its longitudinal vessels. The lecturer insisted upon the study of the soft tissues. He believes that protoplasmic movements, the movements of jelly-like masses and those of involuntary muscles, foreshadow all other movements, those of voluntary muscles included. These movements take place in all animals, and are of primary importance. The involuntary movements occur in the œsophagus, stomach, intestine, uterus, heart, and blood-vessels; they do not require the presence of bone for their manifestation. The lecturer gave it as his opinion that the heart of the mammal forms the type for the whole voluntary system of muscles. He illustrated his meaning by stating that if the element of bone was eliminated from the chest, the muscular arrangements of the chest would be found identical with those of the ventricles of the mammal. The muscles of the chest correspond in their general directions with those of the abdomen and extremities. He then spoke of the heart beating within a greater heart, the chest or thorax; and so also of the viscera within the abdomen. The function of the heart and chest (or the lungs within the chest) was to bring the blood and the air face to face, and to permit a free interchange. He explained that the circulation in animals must be studied in connexion with digestion and respiration; the ingested food forming blood, which to be nutritious had to be purified by the air. The lecture was illustrated with numerous diagrams and a large number of experiments—notably one, showing that the rotation or gyration of the cell contents of plants may be produced artificially, and by purely physical forces—viz., osmosis, capillarity, and evaporation.

THE ALCOHOL DECLARATION AGAIN.

THE medical men of Islington feel aggrieved by the recent—not very recent either—declaration concerning the use of alcohol. They think it an unwarrantable reflection on the profession, and have relieved their minds in a series of resolutions which will be found in our advertising columns. It is perhaps to be regretted that they have allowed their feelings to be pent up so long, and should now revive the question when any fault in the declaration or the mode of its publication has been wellnigh forgotten in the hope that good, on the whole, would come of it.

We ourselves are not so thin-skinned in regard to this matter, and have no fear that the profession will suffer by anything stated in the declaration. As we said at the time, it is a shabby thing to blame the medical profession for intemperance. But this charge is only made by that most intemperate class of men—the teetotalers—and the kindred class of persons who drink intemperately and are mean enough to charge their vice upon someone else. The charge was not made in the declaration, though, perhaps, this might have been more carefully worded. If there was any error in the course pursued, it was that the signataries should have put themselves so much at the disposal of persons who were likely to abuse their expressions, and who actually did abuse them, for no sooner was this declaration printed than it was circulated by the National Temperance League throughout the length and breadth of the land in the same post with one of the most insulting and absurd pamphlets we have ever read, on "The Duty of Medical Men in regard to Intemperance." The second resolution of the Islington doctors very properly condemns this mistake. Medical men were not only justified in sounding a note in

favour of care in prescribing alcoholic stimulants which are so much abused, but it was their duty to do so both on patriotic and therapeutic grounds. But it should have been done in a quiet way and as the result of a scientific discussion in the medical societies. The profession will forgive the error of procedure in consideration of the motive and the general desire to help in abating the great evil of intemperance. But the next time such a question is raised it must be discussed in a scientific way, and in a less heated atmosphere than that of the National Temperance League. We venture to believe that the best medical practice is now characterised by so much care and moderation in regard to this point that the statement of it in a scientific proposition will be the best contribution to temperance which the medical profession can make.

THE CONJOINT SCHEME FOR SCOTLAND.

THE number of conjoint schemes is really exciting. Scotland has now achieved a scheme, which may be seen on another page. Whether it will satisfy the General Medical Council or the Government is doubtful, though both these parties are apt to be satisfied with very unsatisfactory instalments of what is desirable. We are pretty sure of one thing—that it will not satisfy the public opinion of the profession, though by the substitution of the Branch Council for a Committee of Reference, as in the other schemes, it avoids the multiplication of medical authorities, and secures a relation to the Medical Council which ought to give greater confidence.

The most noticeable features of the scheme are—that it contemplates examination only in clinical subjects, and, secondly, that the fee to be charged is not to exceed five guineas. The Scotch bodies agree to give their diplomas or degrees only to those who have passed the examination of the Conjoint Board. It is assumed in this scheme that examination in only a few so-called practical subjects shall be the care of the Conjoint Board, and that examination in other subjects shall continue to be, as at present, the function of all the Scotch bodies mentioned in Schedule A of the Medical Act. This is a curious assumption. Examination in the fundamental subjects is as important as examination in clinical ones, or even more so, for a man who has satisfactorily passed a sound examination in these is morally certain to take pains to complete his practical medical and surgical education. As we anticipated, the cost of the Scotch scheme is to be modest. The five guineas even which it adds to the cost of the qualifications of the two Colleges will make the sum to be paid by successful candidates less by ten pounds or guineas than in the Irish and English schemes.

CAMBRIDGE PHILOSOPHICAL SOCIETY.

AT a meeting of this Society on the 27th ult. Dr. P. W. Latham read a paper "On some of the Symptoms produced by Uræmic Poisoning in Chronic Disease of the Kidney." The object of this paper was to show that many of the symptoms as to the mode of production of which in chronic Bright's disease much discussion has hitherto arisen might reasonably be explained; that the factors involved were (1) the impeded passage of the blood through the minute arteries of the system, caused by excessive contraction and hypertrophy of the muscular walls of these vessels, as has been demonstrated by Dr. George Johnson; (2) the hypertrophy of the heart developed by the resistance offered to the circulation from the contraction of these small arteries; (3) the impoverished state of the blood, which is the necessary accompaniment of the disease.

The author first dwelt upon the occurrence of paroxysmal dyspnœa or asthma, and, after discussing the effects which would be produced if the minute branches of the pulmonary artery were suddenly contracted, and by what general symptoms and physical signs such an event would be accompanied, he showed by reference to cases recorded by other observers, and from instances which had come under his own observation, that this theory as to the production of the dyspnœa was supported by facts. In the next place he referred to epileptiform convulsions and uræmic coma, and pointed out why in some cases convulsions might occur and not in others, owing to the predominance of one or other of the factors above mentioned. He then went on to say that, although cerebral apoplexy not infrequently occurred where there was atheromatous degeneration of the arteries, yet that, independently of this, apoplexy might be caused by the velocity of the blood through the minute tubes being retarded by their contraction (the velocity through a tube varying as the square of the radius of the section) to such an extent as to allow of the formation of a small coagulum of fibrin or a thrombosis; there would then be complete obstruction, and consequently the greatest possible pressure would be brought to bear on the arterial wall, and result not improbably in rupture. This also, he contended, explained the production of pulmonary apoplexy, and minute apoplexies in the kidneys and spleen and hæmorrhagic infarctions occurring in chronic Bright's disease where no valvular mischief of the heart or endocardiac disease existed.

THE LEGALITY OF CHARGES FOR MEDICINE BY SCOTCH GRADUATES.

WE direct the attention of our readers, and especially of Scotch medical graduates, to a decision, reported in another page, at the Marylebone County Court denying the legal right of such graduates, and indeed of all medical men, to charge for medicine supplied unless possessed of the licence of the Apothecaries' Company. The 31st section of the Medical Act seems to us violated somewhat grossly in the decision. This section is as follows:—

"Every person registered under this Act shall be entitled, according to his qualification or qualifications, to practise Medicine or Surgery, or Medicine and Surgery, as the case may be, in any part of Her Majesty's dominions, and to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the cost of any medicines or other medical or surgical appliances rendered or supplied by him to his patients; provided always that it shall be lawful for any College of Physicians to pass a bye-law to the effect that no one of their Fellows or Members shall be entitled to sue in manner aforesaid in any court of law, and thereupon such bye-law may be pleaded in bar to any action for the purposes aforesaid commenced by any Fellow or Member of such College."

It has been the universal understanding of the profession that since the Act of 1858 all the medical qualifications in Schedule A were equally good for the recovery of charges for medical service, including the cost of any medicines or other medical or surgical appliances rendered or supplied by the possessor of such qualifications to his patient. The Poor-law Board has taken the same view of medical qualification. But Mr. Macnamara's judgment is different, and he seems to think, not only that a graduate of a university or a licentiate of a College of Physicians may not supply medicines to his patient, but, further, that in doing so he renders himself liable to all the pains and penalties of the Apothecaries' Act of 1815. His judgment seems to us entirely at variance with the spirit and letter of the 31st section. How is it possible to reconcile the power of "every registered person," "according to his qualification or qualifications," to recover reasonable charges for professional aid

and cost of medicines, with the notion that only those licensed by the Apothecaries' Company may supply medicines? We have evidently all been in error in thinking the monopoly of the Apothecaries' Company to have been abolished.

The Edinburgh University should see that this question is carried to a superior court. Other bodies vindicate the privileges and rights of those holding their diplomas, and so should the University of Edinburgh. Until this is done Scotch graduates in England labour under serious disabilities as compared with English apothecaries; and the boasted abolition of territorial distinctions of qualification, which was the chief glory of the Act of 1858, is not a fact. We cannot doubt that a superior court would reverse the judgment of Mr. Macnamara.

LONDON WELLS.

IT is to be regretted that Mr. Kay Shuttleworth, when he asked for the recently published instructive Parliamentary Return of Surface Wells in the Metropolis, did not also ask that the return should be headed by the following quotation from the report of the Rivers Pollution Commissioners on the Mersey and Ribble basins. Writing of the *purification of sewage by filtration*, the Commissioners say: "Excellent examples of this kind of purification are met with in London itself. Chemical analysis shows that the water-bearing gravel of London is supplied almost exclusively by sewage, and the water pumped from the shallow wells in London is little else than filtered sewage. Now, although this water cannot be used for domestic purposes without great risk to health, it is so bright, colourless, and sparkling, and contains, moreover, such a minute proportion of organic matter, that the most fastidious could not object to its admission to running water. The large quantities of nitrates and carbonic acid, the products of the oxidation of fæcal matters, which this water contains, impart a cool and agreeable taste, which notoriously causes it to be preferred by many of the inhabitants to the much purer but more tasteless water supplied from the Thames and the Lee."

SLAUGHTERHOUSES IN THE LARGE TOWNS.

IT is distressing to find that the first retrograde step in sanitary legislation has been taken by one of the few medical men in Parliament. Thirty years ago sanitary reformers arrived at the conviction that the slaughtering of animals ought not to be carried on in the midst of crowded populations. Parliament endorsed that view, but in deference to vested interests the practice was allowed to go on for thirty years. That time has expired, and Dr. Brewer has now proposed that the privilege of slaughtering animals in London should be indefinitely prolonged. The City Commissioners of Sewers have resolved to oppose the Bill; and although a strong deputation of slaughterers from the purlieus of Aldgate have waited upon them for the purpose of inducing them to alter their determination, we have sufficient confidence in the public spirit of the Commissioners to have no fear whatever that the request will be complied with. It is scarcely necessary to recapitulate the objections to the practice of slaughtering cattle in towns. It is not the slaughtering only which is objectionable, but the offal-selling, blood-collecting, and catgut-spinning, which are productive of a state of atmosphere that is, at all events, offensive, if it cannot be demonstrated to be positively unwholesome. The practice is the more indefensible in London because splendid abattoirs have been provided at the cattle markets at the public cost.

UNIVERSITY COLLEGE, LONDON.

ON Wednesday evening last a brilliant *soirée* was given by the professors of University College to the students, past and present, and their friends. Several hundreds of ladies and gentlemen enjoyed the entertainments provided for them, which included the music of the Coldstream Guards' band in the library, and some very excellent glee-singing by the College Musical Society, under the able direction of Dr. Roberts. On this occasion the Slade Fine-Art Department was thrown open for inspection, and we noticed with satisfaction the very complete arrangements for the study of the living model. A large number of pictures, photographs, microscopes, &c., were provided for the entertainment of the company, which did not separate till a late hour.

DR. STOKES.

THE baronetcy about to be conferred on the Regius Professor of Medicine in the University of Dublin is a worthy tribute to one of the most eminent physicians of the day. Dr. Stokes graduated at Edinburgh in 1825, was made D.C.L. of Oxford and LL.D. of Edinburgh in 1860, and has long been recognised as one of the pillars of the great Dublin School. To a wider circle he is known as the author, among other treatises, of the still classic work on "Diseases of the Heart and the Aorta," and as an enlightened and impartial member of the General Medical Council. Closely as the honour conferred upon him succeeds that bestowed on Professor Christison, of Edinburgh, the most insular of Irishmen can have no reason to complain that the sister island absorbs a disproportionate share of the Royal favour.

NEWSPAPERS FOR HOSPITALS.

WE are anxious to bespeak for the benefit of hospital patients a portion of the newspapers now daily left by passengers in railway trains. Every morning train that reaches London brings with it numbers of gentlemen who buy papers to be read during the journey, and to be cast aside when they reach their destination; and these papers are collected by the railway porters in armfuls. What becomes of them? Some companies have established porters' reading-rooms, others send papers to a neighbouring workhouse. We cannot but think that there must be many which could well be spared for a neighbouring hospital; and it would be an act of genuine kindliness if directors and traffic managers would bestow a thought upon the distribution of the resources thus placed at their disposal. The tedium of hospital-life is often a serious obstacle to the improvement of the patients; and nothing would be so likely to relieve it as intelligence from the world outside the walls.

MEDICAL SALARIES IN BELFAST.

MR. O'BRIEN, one of the Irish Poor-law Inspectors, has written to the Belfast Board of Guardians calling their attention to the entirely inadequate compensation at present assigned to the six medical officers of the city stations—namely, £75 a year for attendance on an average of 3400 cases, about a third of whom have to be attended at their own homes. Mr. O'Brien combats the objection to an increase—that the medical officers receive certain fees as vaccinators and registrars. He remarks that the Legislature has simply provided what appeared to be barely sufficient compensation for these specific duties, and that it would be as much opposed to the spirit of the law to apply the profits thereby insured in reduction of the salaries allowed for duties performed under the Medical Charities Act, as to apply in that way the earnings yielded by the

private practice of the medical officers. Mr. O'Brien also points out that whilst the duties of the medical officers are not less arduous than those required in Dublin and Limerick, the salaries are £50 a year less in Belfast than in Dublin, and £25 less than in Limerick. It is to be regretted that the guardians refused to respond to this appeal; but we call attention to the fact that the inspectors in Ireland not only inspect the arrangements for medical relief, but endeavour to procure for the medical officers fair remuneration. We commend the example to the President of the Local Government Board.

HYPODERMIC INJECTION OF VACCINE LYMPH IN SMALL-POX.

WE are glad to be able to say that the hypodermic injection of a copious quantity of vaccine lymph in strict accordance with the method described in THE LANCET of May 25th by Mr. Furley, of Edinburgh, is now being carefully tried as a remedy in small-pox by Dr. Grieve, of the Hampstead Hospital. We can testify to the care taken by Dr. Grieve to give a thorough trial to this treatment, and we hope to be able shortly to give a detailed clinical statement of the results. It is really very difficult to say in any case of small-pox in a vaccinated subject treated in this way how much of the modification of the disease is due to the primary vaccination. It is most desirable that the treatment should be tested in the case of persons who have never been vaccinated. Practitioners who encounter such cases would contribute greatly to the settlement of this question by sending them to the Hampstead Hospital, or giving notice of them to Dr. Grieve, who will willingly take the trouble of going a reasonable distance to inject the lymph. Of course the sooner after the unmistakable appearance of the disease this procedure is practised the better.

ARMY AND NAVY MEDICAL OFFICERS' ANNUAL DINNER.

THE annual dinner of the medical officers of the Army, Navy, and Indian services took place at the Freemasons' Tavern on Thursday evening, the 30th ultimo, Sir J. Ranald Martin, C.B., presiding. The heads of the military and naval medical services, and numerous officers both on full and retired pay, were present, with some of the professors from Netley. The President of the Royal College of Physicians and Mr. Hancock, Vice-President of the Royal College of Surgeons, were there as guests. The speeches were, wisely we think, few and short on the occasion.

STATE MEDICINE IN IRELAND.

"HOME RULE" seems extending in the sister isle from matters political to matters medical. On Friday, the 31st ult., the Lord Lieutenant was waited on by a body of the profession with the petition that he should use his influence with the Government to have a Royal Commission appointed with the view of investigating the sanitary condition of Ireland for legislative purposes. The Commission held in England and Wales was referred to. His Excellency promised to give the subject his best consideration; but submitted that a commission was not needed for Ireland, as the Government had ample means of information and "were prepared to bring in a Bill."

THE CHOLERA.

To the present moment, so far as our information extends, the movements of cholera in Europe and in Arabia, while such as to excite watchfulness, have not been of a nature to provoke alarm. Early in April the disease became again active in Western Arabia and in parts of Russian and Austrian Poland. Medina, which had suffered from a sharp outbreak in September of last year, was attacked once more in April of the present year during the accumulation of pilgrims there after the completion of the Mecca rites.

In Europe cholera broke out early in April in the districts of Proskourow and Podolsk in the Government of Podolia, South Russia. From the 12th April to the 9th May 322 cases were reported and 95 deaths. Proskourow is situated in the north of the province of Podolia; Podolsk is adjacent to the river Dniester, in the south of the province. About the same time that cholera broke out in Podolia it appeared in the neighbouring district of Austrian Poland at Kamionck.

SEWAGE FARMS.

WE observe with satisfaction that the returns as to the number, economy, and sanitary result of sewage farms, suggested in our article of May 18th, have been ordered by the House of Commons, on the motion of A. J. Brown, Esq., M.P. These returns will form a substantial instalment of the information required, though we cannot but think that Mr. Brown would have done well to move that the inquiry should be remitted to a special commission, as we suggested. The fact is, that the returns voluntarily furnished by interested parties require to be checked by independent persons, and the evidence of sanitary results should be taken from opponents as well as friends, if it is to be of any public value.

HANWELL LUNATIC ASYLUM.

DR. RAYNER, assistant medical officer at Bethlehem Hospital, has been appointed medical superintendent of the male department of the Hanwell Lunatic Asylum. While we regret that the visitors did not take advantage of the opportunity of Dr. Begley's retirement to place the whole establishment under one superintendent, and so to effect a complete reorganisation of it, we are glad to believe they have made a good appointment. It remains now for them to grant Dr. Rayner the necessary powers to effect much-needed reforms.

SMALL-POX AT TIPTON.

FORTY-ONE deaths from small-pox have occurred in four weeks in this town, with a population estimated at 29,000. Not a word is said in the report before us of the need for the revaccination of every person once vaccinated. The immediate and copious vaccination of unvaccinated children is a still more urgent necessity. The anti-vaccinators regard small-pox as a blessing in disguise. The disguise is certainly very complete at Tipton. Our advice is, Vaccinate and revaccinate. A few of the Anti-Vaccination League might possibly be got to act as nurses, in the hope of catching the disguised blessing. We would suggest that Mr. Francis William Newman be sent for.

THE REGULATIONS FOR A CONSTANT WATER-SUPPLY.

THE Paddington Vestry has adopted a resolution recommending that the regulations for a constant water-supply proposed by the water companies, and amended by the Metropolitan Board of Works, be submitted to some independent medical authority, such as the Association of Medical Officers of Health, in order to obtain an opinion from a sanitary point of view generally, and in particular as to the expediency of using lead pipes.

HOW SMALL-POX SPREADS.

POPLAR has been repeatedly put forward as an example of a well-vaccinated district. Of course the stational arrangements are in accordance with the views of the central office, and there is an inspector of vaccination. Yet spite of all this there are unvaccinated people, and small-pox spreads. And no wonder if the following case be a fair example of the sort of action which prevails. A man's wife died of small-pox, and no inquiry was made by anyone as to the sufficiency of vaccination, either in the family or neighbourhood. The husband had not been vaccinated, and of course took the disease. An infant had not been vaccinated and died. No person in the neighbourhood was revaccinated, and anyone wishing to be vaccinated or revaccinated would have to wait and attend the station at the day and hour appointed, no matter at what inconvenience.

We consider such arrangements utterly illusory. On the occurrence of a case of small-pox it ought to be the duty of the public vaccinator to go and ensure the safety of the rest of the household and the neighbours also by efficient vaccination.

DENGUE.

RECENT information we have received leaves little doubt that the epidemic of dengue which lately prevailed at Zanzibar and Aden, and which is more widely prevalent in parts of Bengal, was extensively diffused among the pilgrims at Mecca during the recent pilgrimage. The accounts describe the disease prevailing there as an epidemic fever, with rheumatoid symptoms, of sudden invasion and brief duration, and in no instance ending fatally.

COLONEL ANSON.

WE have much pleasure in stating (on the authority of Mr. Manley Sims, his medical adviser) that the honourable and gallant Colonel is now convalescent, and takes daily drives in the park.

THE annual meeting of the Brompton Hospital for Consumption was held last week, the Earl of Derby, who is the president of the corporation, taking the chair. During the past year 1153 in-patients and 11,725 new out-patients have been treated. Reference was made to the large sum of £100,000 which had been bequeathed to this institution by Miss Read, the eccentric old lady whose vagaries while living in Stamford-street caused so much comment. The sum of £500 was also acknowledged from a lady. The Brompton Hospital for Consumption may now be considered in a most satisfactory financial position.

THE executors of the late Robert Read, Esq., have handed over to the treasurer of the General Hospital, Belfast, £100 bequeathed to this institution by the deceased gentleman. A Training School for Nurses has been established in connexion with the hospital. On Monday evening, May 27th, Mr. Warden, the proprietor and manager of the Theatre Royal, gave a special entertainment in aid of the new institution. The proceeds, amounting to £60, were handed over to the treasurer.

THE Senate of the University of Cambridge have passed a grace to confer the honorary M.A. degree on Dr. Wilson, the Demonstrator of Anatomy in the University. Dr. Wilson formerly acted in the same capacity under Professor Goodsir, in Edinburgh; and has renounced the private practice in which he has been since engaged, near Manchester, to resume the teaching and study of Anatomy at Cambridge.

THE Government has announced that there will be a competitive examination for the Indian Medical Service in August next. As it is probable that few, if any, candidates will be required for the British Medical Service, it may be anticipated that the competition will be correspondingly increased in that of the Indian Medical Department.

DR. GAVIN MILROY has returned to England from his foreign mission. He has gathered, we hear, a large amount of information relative to the Beaupurthuy treatment of leprosy. Dr. Milroy has likewise obtained some valuable facts in connexion with the clinical history and nature of yaws.

THE annual presentation of prizes to the successful pupils of St. Mary's Hospital Medical School will take place on Thursday next, the 13th inst., at 4 P.M. Thomas Hughes, Esq., M.P., has kindly consented to preside upon the occasion, and to deliver a short address to the students.

THERE has been considerable discussion about the quality of the town supply of water at Belfast. The board of guardians submitted a sample of the pipe-water for analysis. The report presented to the guardians at a late meeting declares the water to be unfit for domestic use.

AT the Londonderry Petty Sessions, held on Tuesday, John Stuart, a patient at the County Infirmary, was charged with assaulting one of the medical officers of that institution. After some evidence had been given the prisoner was remanded.

THE mortality in London and twenty other large towns last week was at the rate of 24 deaths annually to every 1000 of the population. There were 37 deaths from small-pox recorded in the metropolis, this number showing an abatement of the disease.

AT Oxford, on the 4th inst., a decree was passed in Convocation authorising the Vice-Chancellor and proctors to nominate two persons to represent the University on the Medical Committee of Reference agreed to in a scheme for an Examining Board for England.

HER MAJESTY has been pleased to give Dr. Vivian Poore permission to wear the Order of the Danebrog, which he received from the King of Denmark in recognition of his services to the Princess Thyra.

IT is rumoured that the new warrant for the Army Medical Service has run aground in the Treasury, where it will remain, we suppose, until the disputes about the funds necessary to float the scheme have been settled.

DURING the past eighteen months it is calculated that there have been 10,000 cases of small-pox in Dublin; the estimated cost to the authorities of each case being £3.

SIR WILLIAM ROSE, we are glad to hear, is recovering rapidly from his paralytic seizure. Sir William Jenner has been in attendance.

FROM the ball in aid of King's College Hospital the profits amounted to the sum of £540 14s. 5d.

DR. RUTHERFORD has been appointed Fullerian Professor of Physiology to the Royal Institution.

SMALL-POX is decreasing in Belfast, but typhus and typhoid fevers are on the increase.

Foreign Gleanings.

PERUVIAN BARK *versus* ERGOT OF RYE.

DR. ANGELO MONTEVERDI has published a book of 279 pages on this subject, and shows by facts that the former is superior to the latter, besides being devoid of any noxious effects. The cases and quotations are numerous, and embrace abortion, metrorrhagia, menorrhagia, amenorrhœa, puerperal fever, hysteria (in which the bark is noxious), affections of the intestinal canal, of the genito-urinary organs, &c. &c. We subjoin a few of the points which the author considers he has proved:—1. The action of the bark and its derivatives is principally exerted on the sympathetic nerve. 2. This action extends over the organs depending on the nerve, as the uterus, the bladder, intestinal canal, and bloodvessels. 3. The action is physiological and excitant in small doses, and pathological in large doses. 4. The bark acts powerfully on the gravid uterus, and should, in deficient pains, be preferred to the ergot. 5. To be used also in retention of the placenta, rather than have recourse to manual interference. 6. Especially in the same placental retention connected with premature birth. 7. The bark is to be employed instead of the ergot in hæmorrhage either during gestation or labour. 8. In amenorrhœa it stimulates the inertia of the uterus. 9. Puerperal fever is simply due to metro-paralysis; the bark in small doses will cure it. 10. The bark is contra-indicated in hysteria and hysteralgia. 11. It is useful in affections of the digestive apparatus, and the genito-urinary system in cases of atony. 12. As far as the bloodvessels are concerned, small doses accelerate circulation, and large ones determine tension of the vessels, which tension is followed by slow pulse. 13. Opium and morphia moderate the action of the bark.

The book will be read with much interest by all members of the profession.

SUPPOSED SCIATIC EPILEPSY.

A young Hungarian, going down stairs loaded with books and portfolios, fell on the seat. Severe pain and tumefaction ensued, for which appropriate means were used, but the front of the right thigh remained in a state of anæsthesia, and the back became over-sensitive. Severe convulsive movements now distressed the patient, and resisted all means directed against them. Billroth, of Vienna, who saw the patient, diagnosed irritation of the sciatic nerve. At this time pressure on the nerve caused severe spasms and convulsive movements of both legs. Even the arms contracted violently, and the fists struck against the chest. Billroth made an incision eight inches in length (?) along the sciatic nerve, between the tuber ischii and the great trochanter. The nerve was laid bare from the notch to the lower sacral foramen, and was, to the surgeon's astonishment, found in a perfectly normal state. The wound was closed, and the patient on waking had a fit. For two years and five months the convulsive movements recurred from time to time. At last severe onychia of the toes occurred, the nails came off, and Prof. Luminzer having incised the roots, the seizures never took place again.

INOCULATION OF TUBERCULOUS MATTER ON THE HUMAN SUBJECT.

Messrs. Paraskeva and Zallonis, of Syra, in Greece, have published in the *Gaz. Méd. de Paris* (April 27th, 1872), an account of five experiments on rabbits, wherein tuberculous matter, either mixed with the food or inoculated, excited deposits of the same kind in the lungs, thus confirming Villemin's investigations. The authors attempted besides a bolder experiment, and inoculated a fisherman of fifty-five years with tuberculous matter on the upper part of the thigh. This man was suffering from gangrene of the great toe, in consequence of obliteration of the femoral artery. He steadily refused amputation, and the authors considered themselves justified in undertaking the experiment. The patient died thirty-seven days after the inoculation, and had never been ill before in his life. Seventeen tubercles in the first stage of development were discovered in the apex of the right lung; two were of the size of split peas, and the others as large as mustard-seeds. Two more tubercles were observed in the apex of the left lung. The liver looked healthy, but presented two tubercles on its convex surface of the size of peas. The authors conclude that they have proved their point, but it should be recollected that, in ordinary autopsies, tubercles are often found when their existence from the history could hardly have been suspected. As for animals, it may always be asked whether we can, in all cases, conclude that the phenomena observed upon them would be the same upon man.

ADDISON'S DISEASE.

Prof. Béhier has delivered, at the Hôtel Dieu of Paris, a long and learned lecture on the above disease. He concludes that much obscurity still exists respecting the histology and pathology of the suprarenal capsules; and that it is not proved that in those bodies resides the power of developing the bronze skin. He would be inclined to say that the pigmentation just named may accompany every decided state of cachexia.

CONJOINT EXAMINATION SCHEMES.

ENGLAND.

THE following are the principal points of importance in the scheme for a Conjoint Examination suggested by the Joint Committee of the Colleges of Physicians and Surgeons, and lately under consideration by the Council of the College of Surgeons.

The Committee of Reference is to consist of an equal number of representatives of medicine and surgery—viz., eight of medicine, elected by the Universities and the College of Physicians, in equal proportions; and eight of surgery, elected by the Universities and the College of Surgeons. Two representatives of medicine and two of surgery are to be replaced annually. The Committee of Reference is to appoint its own chairman, treasurer, and registrar; in fact, so far as the licence of the Royal College of Physicians and the diploma of membership of the Royal College of Surgeons are concerned, the "Committee" appears to assume all the functions hitherto belonging to the Colleges themselves.

One of the chief duties of the Committee of Reference will be to settle the number of, and to elect, the examiners. It is proposed to have 5 examiners in Chemistry and Physiological Chemistry, 5 in Materia Medica and Pharmacy, 8 in Anatomy and Physiology, 8 in Medicine, 8 in Surgery, and 8 in Midwifery; but the Council of the College of Surgeons proposed to reduce these last to 6, so as to make 40 instead of 42 examiners.

"It will be observed that special examiners on Forensic Medicine are not named, under the belief that, so far as that subject should be included in the proposed examinations, it may be included under Chemistry and other subjects. It is recommended that the subject of Physiology be taken partly by the examiners in Anatomy and partly by the examiners in Chemistry, so much as relates to Anatomy (Histological Anatomy) and the functions of organs being included in the examination on Anatomy; and so much as relates to Physiological Chemistry, or the chemistry of the secretions, excretions, &c., being included in the examination on Chemistry."

The method of appointing examiners is somewhat peculiar; for, though the period at which the nomination will take place is to be advertised, no mention is made of any invitation to forward their names and claims for the offices. This must, we imagine, be an oversight. The election of examiners is to be by the Committee of Reference, by ballot, "after such discussion as the Committee may think desirable." This Committee will act as visitors of examinations, and will prepare an annual report, to be presented in the month of January to the several co-operating medical authorities; and they will also publish in February the number and place of study of the passed and rejected candidates during the previous year.

There are to be three professional examinations. The *first*, including Chemistry as applied to Pharmacy, Toxicology, and Physiology, together with Materia Medica and the Pharmacopœia, is to be passed after eighteen months' professional study dating from registration as a medical student. The *second* examination will be in Anatomy and

Physiology, and is to be passed after two years' study. The *third* or pass examination is to be after four years' study, and after the age of twenty-one. It is evident from this arrangement that the Committee contemplates the commencement of study in the summer session, for otherwise it would be impossible for the student to pass his anatomical examination at the end of his second winter.

SCOTLAND.

The following is the proposed scheme for a Conjoint Board for Medical Examinations for Scotland, as amended and adopted by the delegates from the medical authorities of Scotland in conference with the Scottish Branch Council on 24th May, 1872:—

1. That a board of examiners, to be named "The Conjoint Board for Medical Examinations for Scotland," be constituted by the cooperation of the following medical authorities—viz.: the Royal College of Physicians of Edinburgh; the Royal College of Surgeons of Edinburgh; the Faculty of Physicians and Surgeons of Glasgow; the University of Edinburgh; the University of Glasgow; the University of Aberdeen; the University of St. Andrews.

2. That the co-operating medical authorities bind themselves (conditionally on the requisite legal sanction being obtained) not to grant their degrees or diplomas to anyone who has not passed the examinations by the Conjoint Board.

3. That the duty of this board shall be to examine in clinical medicine, in clinical surgery, and in midwifery, all candidates for registration under the Medical Act, 1858.

4. That no candidate shall be taken on trial by the Conjoint Board who cannot produce evidence that he has completed the curriculum of medical study required by the Medical Council.

5. That the examiners on the Conjoint Board shall be chosen in equal numbers by each of the co-operating medical authorities, excepting the University of St. Andrews, which shall choose one examiner.

6. That the examiners shall be elected in the first instance for a period of five years, and that thereafter one of the examiners chosen by each of the co-operating authorities (except in the case of the University of St. Andrews) shall retire every year, and shall not be re-eligible till he shall have been out of office for at least one year.

7. That the expenses of the examination by the Conjoint Board shall be not more than shall defray the expense of the examination, but shall not exceed five guineas.

8. That the fees for the degrees and diplomas of the medical authorities shall be regulated as hitherto by the bodies granting the same.

9. That the Branch Council shall act as an honorary committee of management, and in that capacity shall regulate the number and remuneration of the examiners,—shall fix the subjects for which each body shall elect examiners,—and shall superintend the arrangements for the examinations generally.

10. That no member of the Branch Council shall be an examiner on the Conjoint Board.

11. That the conjoint examinations shall be held in Edinburgh, Glasgow, and Aberdeen, at such places in these cities, and at such periods, as shall from time to time be fixed by the committee.

THE ROYAL SOCIETY.

AT the meeting on the 30th ult. (Mr. G. B. Airy, C.B., president, in the chair), Mr. T. B. Curling, F.R.S., introduced a paper "On Ammonia in the Urine in Health and Disease," by C. M. Tidy, M.B., and W. B. Woodman, M.D.

The authors differ from Neubauer regarding the average normal excretion of ammonia. They find it to be about two grains, while Neubauer gives 10·8 grains per diem. The total number of cases upon which observations were made exceeded 200. The method adopted by the authors is as follows:—

The freshly passed urine is to be first diluted with a given bulk of distilled water sufficient to destroy all apparent colour, a known quantity of the urine being taken in each case. To this is to be added an excess of Nessler's solution, and then compared with the tint depth produced by known quantities of ammonia in a similar bulk of liquid, treated with the same solution. The trace of ammonia in the water itself must be always allowed for. The external temperature in the observations was always about 62°. They regard 60 oz. of urine as the normal amount daily excreted by adults.

The authors found that in health the excretion of ammonia is largest under thirty-five years of age; increased after meals and during exercise. They consider that this excretion by the kidneys is governed by a similar law to that which regulates the formation of dew.

In disease the lowest quantities were met with when the pulse was rigid, the highest average being met with when the pulse was nearly normal. The excretion was increased when the skin and tongue were moist, when the diet was full and included stimulants, and when the bowels were open. Acid medicines also increased the secretion.

A number of special diseases are alluded to. The cases taken just before death are very remarkable, showing a vast decrease in the amount of ammonia. In two cases it was entirely absent, the only cases of entire absence known to the authors.

MARYLEBONE COUNTY COURT.

(*Before* HENRY J. MACNAMARA, Esq.)

IMPORTANT DECISION AFFECTING THE POWERS OF SCOTCH MEDICAL GRADUATES.

STEVENSON *v.* GLIDDON.

THIS was an action brought by James Stevenson, M.D. Edin. and M.R.C.S. Eng., on the Medical Register, to recover fees, and for medicines supplied to the defendant. The case came on for hearing on the 10th of April, and was referred to Mr. Bullock, an attorney of the court, with leave for either party to apply to the Judge upon any point of law which might arise. An application was then made to the Judge by the plaintiff in consequence of the arbitrator disallowing the items in his claim for medicines. Mr. Hume Williams, instructed by Mr. Clarke, appeared for the plaintiff, and Mr. Pain for the defendant. After a very long argument on both sides, the Judge said it was a most important question as regarded the medical profession, and he would deliver his judgment on some future day.

On the 22nd of May the Judge delivered the following judgment:—"I am of opinion the award of Mr. Bullock must be upheld, and his construction of the Medical Registration Act is correct. The facts are shortly these:—The plaintiff, a medical practitioner, sought to recover for medicine and attendance. He is a member of the College of Surgeons in England, and is authorised to practise as a physician by a diploma from the University of Edinburgh; but is not qualified as a member of the Society of Apothecaries in London. He is registered under the Act of 1858 (21 and 22 Vict., c. 90) as such physician and surgeon, but not as an apothecary. His bill contains charges for visits alone, for medicine alone, and for visits and medicine. The arbitrator disallowed the plaintiff's charges, amounting to about £11 for medicines supplied alone, without advice or visits, on the ground that he could not recover for medicine supplied to the defendant which was not ancillary to a surgical case, as the plaintiff was not qualified as an apothecary. It was admitted that this would have been so at all events in the case of an English physician and surgeon before the Medical Registration Act of 1858; but it was said that since that statute a person registered under it in respect of one or more medical qualifications could recover for medicines supplied, and section 31 was relied upon. In order to arrive at the true construction of this statute, let us look at the state of the law at the time when it passed, and the mischief it was intended to remedy. There were, and still are, three orders of the medical profession distinctly recognised, physicians, surgeons, and apothecaries; and three distinct institutions which confer qualifications entitling each to practise, the College of Physicians, the College of Surgeons, and the Society of Apothecaries. The statute 55 Geo. III., c. 194, then and now in force, enacts

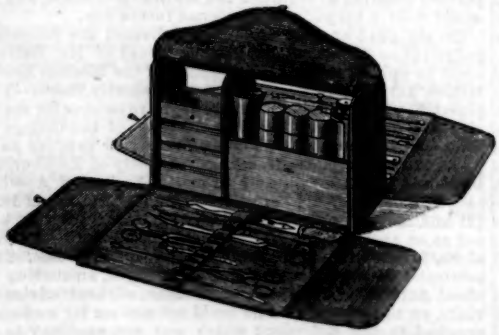
that persons practising as apothecaries without a certificate from the Society of Apothecaries of examination and qualification, should be liable to penalties and disabled from recovering fees. That passed for the public good and to ensure competency in that class of medical practitioners; but it was still considered that unqualified persons practised. The Act of 1858, so far from repealing that statute or weakening public security, was intended to strengthen it by requiring medical practitioners to be registered, so that unqualified persons might be prevented from practising. Registration under this Act is made evidence of qualification, but is not substituted for it. See the title and preamble of the Act and sections 4, 15, 18, 26, 30, and 32. Another object of section 31 is to enable physicians to recover fees. Now read Section 31 and it is clear that it is not intended to repeal the Act of George III., or to allow those persons to practise as apothecaries who have not a certificate from the Society of Apothecaries, and who would be liable to penalties." — Attorney-General *v.* Royal College of Physicians, 30, *Law Journal*, Chanc. 757; Wilcock's "Treatise on Laws relating to Medical Practitioners"; Weightman on the "Medical Practitioners' Legal Guide," 1870.

It was then contended, and evidence was given to show, that a practice exists in Scotland for physicians or surgeons to act as apothecaries; but no satisfactory evidence was adduced as to the law in Scotland on this point. This, however, is immaterial, as a medical practitioner must be registered as an apothecary to practise as such in England.

In the case of "The Apothecaries' Company *v.* Collins," 4 B. and Ad. 604, it was expressly decided that a person authorised to practise as a physician by a Scotch diploma was not exempt from the penalty for practising here as an apothecary without the certificate from the Society of Apothecaries.

NEW GYNÆCOLOGICAL BAG.

GYNÆCOLOGISTS cannot be too grateful to the Messrs. Arnold and Son, of West Smithfield, for this neat and compact bag. It includes everything they are likely to want, and is calculated to save them much time and trouble by supplying them with a place for everything and everything in its place. The comfort and success of many uterine operations will be greatly furthered by the use of this bag.



It is light, portable, compact, and strong, resembling, when closed, a neat secretary's writing-case. The framework is of strong material, covered externally with morocco leather, and is divided into an upright central compartment, with nests or divisions for specula and bottles, and a nest of four mahogany drawers, one fitted with four small bottles, and the remainder for pessaries, stems, &c. When unfastened the two sides of the bag fall apart, exhibiting at one view all the instruments therein contained, held in their respective places by bands of leather, from which they can be easily and speedily withdrawn. The cost of the Gynæcological Bag complete, with instruments, is twenty guineas; without instruments, three guineas.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

(FROM OUR OWN CORRESPONDENT.)

THE twenty-third annual meeting of the American Medical Association was convened at Philadelphia on the 7th of May, and continued in session four days. The number of members in attendance was upwards of one thousand. As a great social gathering of the profession from all parts of the country the meeting was eminently successful. The utmost good feeling prevailed, and feasting, sight-seeing, and congratulatory speech-making formed the order of the day. As a scientific body the Association is a lamentable failure, its annual meetings being barren of interest to those who attend for the purpose of advancing any branch of medical science.

At the opening of the session the president, Dr. Yandell, delivered an address, in which he reviewed the history of the Association. Among the reports of standing committees the following are of interest:—The committee on Medical Education condemned the rivalry of medical colleges, and recommended that no more delegates be admitted from those schools which do not adopt the plan of education laid down by the Association. The committee on Nomenclature recommended the adoption of a new system; but it was decided to print the report, and make it a special subject of discussion at their next annual meeting. The committee on Public Hygiene recommended the organisation of institutions devoted to instruction in hygiene, and also that medical colleges take more cognisance of the subject. A proposition that the Association approve the establishment of a National Sanitary Bureau by the General Government was not adopted.

A resolution was unanimously agreed to recommending physicians to discourage the use of alcoholic stimuli in their practice. A committee was appointed to investigate the transmission of zymotic diseases from animals to the human species. The inevitable woman question was introduced by the committee on Ethics, which recommended that the delegates from certain organisations of Washington, which admitted women students and practitioners, and also unlicensed practitioners, to their privileges, should not be admitted. The report, after a very animated discussion, was adopted.

The scientific papers and discussions in the sections were of considerable interest to those in attendance, but little of permanent value was placed on record. The "Prize" for the best essay was accorded to the author of the paper on "The Physiological Value of Phosphorus as an Organismal Element."

Correspondence.

"Audi alteram partem."

MECHANICAL RESTRAINT IN CASES OF INSANITY.

To the Editor of THE LANCET.

SIR,—My own experience is decidedly in favour of the employment of restraint in suitable cases, which I admit are not frequent; but, when necessary, it is often the most humane as well as the most scientific means at our disposal of preventing patients inflicting injuries upon themselves and others. Doubtless there are other plans of treatment which ought first to be tried, and which generally succeed; but I do not myself look upon restraint as many do, as the opprobrium of alienists, or as a *dernier ressort*, to be held in abhorrence. For eighteen years I have seen it employed in certain cases with the best results; the last one was that of a man, a few years since, who attempted to tear out his tongue in a fit of excitement, and in whom restraint succeeded when full opiates and other means had failed. In fact, in such cases as this, it is far better, far more humane and scientific, to adopt the proper form of restraint at once, than to waste time

and strength and patience in fruitless attempts to pour medicines down the throat, and in various devices intended to defeat the object of the patient. I may add that I have never experienced the least opposition or objection on the part of the Commissioners in Lunacy to the adoption of restraint whenever the nature of the case and the reasons for the treatment were fully explained to them.

I am, Sir, yours obediently,

WILLIAM C. HILLS, M.D.,
Norfolk County Asylum, May 31st, 1872. Medical Superintendent.

ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editor of THE LANCET.

SIR,—I have been well pleased with your remarks upon the recent meeting of the above-named institution, and I fully agree with you that the word "benevolent" is a misnomer. Last year the subject of canvassing was mooted by Mr. Stamford Felce, others and myself, and I quite hoped that it would have been fully ventilated before this time. I was much encouraged in this hope by correspondence and a pleasurable interview I had last summer with Dr. G. Jonson. I quite expected, from the conversation in that interview, that the subject was to be discussed in council, and have almost week by week looked out for the result of that discussion; whereas nothing has appeared till your brief notice of it. Another year's election is coming on, in which there are forty-one candidates for eight vacancies. Now, sir, I would ask once more, how much good money has been thus squandered in order to accomplish these canvassings? Put it down under the reduced postage-stamp system, which, at a minimum of £30 each, gives £1200 odd. Perfectly monstrous when we *know* how little able are nine-tenths of these widows to meet such an outlay. Surely they had better have sent the poor boy to the school and paid the recently increased premium of £45 per annum? much money would have been saved or at least spent in a legitimate way; and, above all, valuable time would have thus been saved. Take, for instance, the candidate Scott, for his sixth application; 6 × 40 gives £240; this, divided by £45 per annum, gives sufficient money for five years' education and to spare.

I have written so much and said so much on this matter, that I begin to feel it a bore to recapitulate my ideas of the easy application of a remedy for such an "abomination," as you very appropriately term it. But, in conclusion, I should like to ask a question of my friend, Dr. Jonson, who is reported to have replied, in answer to Dr. Liddell, that "the Council found the difficulty so great, and opinions among subscribers so divided," &c. I would like to know when and how has the sense of the subscribers been taken? as I have never seen any publication of steps tending in this direction; while I feel convinced that if the Council could be persuaded to invest a sum only equal to one of their yearly canvassings, by half-penny postage, in ascertaining the individual feeling of subscribers, a result would be obtained which would ensure the reform you have so ably urged and advocated.

I am, Sir, yours obediently,

East Rudham, May, 1872. FRED. MANBY.

A GOOD SUGGESTION.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to suggest through your columns that it would be well if the College of Surgeons, like the College of Physicians and many other colleges at Oxford, Cambridge, and elsewhere, were to appoint censors, whose duty it should be to bring questions of professional etiquette and cases of conduct under the notice of the Council, in a regular way, and with a view to the expression of an opinion thereon.

In our profession it is vain to ignore ethical questions. They cannot be dissociated from the practice of surgery; and, inasmuch as the diploma of the College of Surgeons is more generally held than any other qualification, it would be for the dignity and advantage of the profession at large if there were some authorised channel by which such matters could be brought before the Council.

If this were done, I believe that many unseemly disputes, many painful disagreements (which damage us in the eyes of society), to say nothing of graver matters, might be promptly settled by the judgment of a body, whose ripe experience and distinguished position would invest their opinion almost with the weight of a judicial utterance.

I am, Sir, yours faithfully,

W. FAIRLIE CLARKE.
Mansfield-street, Cavendish-square, W., June 3rd, 1872.

THE LATE LORD MAYO.

To the Editor of THE LANCET.

SIR,—With reference to a paragraph which appeared in your issue of April 13th, reflecting on the post-mortem examination of the late Viceroy of India, and the omission of all evidence as to the condition of the viscera, I, as one of those who signed the report, beg to state that a post-mortem by dissection was not allowed, this being considered unnecessary for the ends of justice.

I remain, Sir, yours faithfully,

ROBERT H. MORE, M.D.,
Assistant-Surgeon, R.N.
H.M.S. "Glasgow," Bombay, May 10th, 1872.

DENGUE FEVER.

To the Editor of THE LANCET.

SIR,—A friend in Calcutta writes: "I suppose you have seen an account in the papers of this dengue fever which we have in India this year. It has been a regular plague, and I think about 75 per cent. of the people have had it, not a house or an office in Calcutta where some one is not down with it. It is not dangerous to adults, but very painful, being a combination of scarlatina and rheumatic fever." How the fever was introduced or where from he does not say, but possibly the returning coolies from the West Indies may have been the medium.

Can the jungle fever, mentioned in your last issue as being so prevalent in Calcutta, be a misprint for this dengue fever. I am, Sir, your obedient servant,

London, May 28th, 1872. G. B.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

THE members of the Irish Poor-law Medical Association held their annual meeting on Monday in the College of Physicians, Kildare-street, Sir Dominic Corrigan presiding. The secretary of the Association, Dr. Maunsell, read the annual report, in which he stated, among other matters, that the Poor-law medical officers asked for an increase of stipend, rising with length of service; for promotion to the higher grades of service—viz., superintending health officers, or medical inspectors; for absolute superannuation after a stated period, instead of the present permissive superannuation; also that supervision over them should be conducted by medical inspectors; and that no fresh obligation should be imposed on them, either of a sanitary character or otherwise, without adequate payment. Dr. Rogers, president of the English Poor-law Medical Officers' Association, moved the adoption of the report, and advocated continued combination on the part of the Irish and English Associations, which he believed had resulted in great benefit to the profession in both countries, and in the amelioration of those grievances under which they had so long laboured. It was resolved that a committee be formed to memorialise the Chief Secretary on the injustice of non-payment for certificates in the case of dangerous lunatics, and that a deputation should wait on Lord Hartington to place the matter before him. The association also resolved that measures should be taken to impress on the Government the importance of so constituting the Board proposed in the Local Government Bill for Ireland, now before Parliament, that the Board may include a member specially qualified in State medicine and sanitary science, with a view of carrying out such measures as may be introduced to the Legislature.

The thirtieth annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held on the 3rd inst., in the College of Physicians Examination Hall—Dr. Hudson, President of the College, occupying the chair. The chairman, in his address, referred to the progress of the Society, which, though slow, had been steady and constant, and was gratified to see a new class of supporters in the persons of the students of the Belfast College. An offer of £ 000 had last year been made to the Society by an anonymous member of the profession, provided that £2000 additional should be raised within six months by subscriptions, not less than £50 each, from practitioners residing in Dublin. But he regretted to state that the condition was not fulfilled, and the offer was withdrawn. By the report he found that the donations of the country practitioners amounted to £291, exclusive of bequests, and those of the town members to £265. He did not think these amounts satisfactory, and urged the necessity of making increased exertions on behalf of the deserving objects of the Society. The financial statement showed that the subscriptions for the year amounted to £676 19s. 10d., leaving, after all expenses, £1091 available for distribution.

The annual meeting of the Irish Medical Association was held on Monday last in the Library of the College of Surgeons. Dr. Evory Kennedy, President of the Association, delivered an interesting address, after which Dr. Quinan read the annual report, which was adopted. In the course of a discussion which took place, the antagonistic action of a kindred society—the Irish Poor-law Medical Officers' Association—was deprecated as calculated seriously to injure the common influence of the profession, and suggestions were made by several members that an amalgamation between the two bodies should take place. It was resolved that a Royal Commission to inquire into the sanitary state of the country was much required. Resolutions were also passed, stating that the present salaries of Poor-law medical officers were quite inadequate, and recommending the establishment of a grant, from which the widows and children of deceased medical officers of workhouses and dispensaries in Ireland should be entitled to relief. The members afterwards dined together in the Albert Hall of the College.

Yesterday the College of Surgeons held a meeting pursuant to the provisions of the supplemental charter, to elect officers for the ensuing year, when Mr. Kirkpatrick was elected president, whilst for the vacancy of vice-president, caused by Mr. Kirkpatrick's promotion, Dr. Denham was elected, and Mr. William Colles was reappointed secretary. All the out-going members of the council sought re-election, but were opposed by several candidates, and after a lively contest the following gentlemen were successful:—William Hargrave, Robert Adams, William Colles, Hans Irvine, Rawdon Macnamara, George H. Porter, Benjamin McDowel, Edward Ledwich, Alex. Carte, Geo. W. Hatchell, Wm. A. Elliott, Albert J. Walsh, Edward Hamilton, Robert McDonnell, Richard G. Butcher, James H. Wharton, John Morgan, George H. Kidd, and Philip Crampton Smyly; the last five gentlemen being new members.

The preliminary meeting of the Irish Militia Surgeons' Association was held on the 3rd inst., in the College of Surgeons, when it was resolved that the course proposed to be adopted towards the militia surgeons by the Secretary of State for War, in his army organisation scheme, so seriously affects their interests and position that it was incumbent upon them to take immediate steps to secure a fair consideration of their claims. It was also determined that the committee should prepare a memorial for presentation to the Secretary of State for War, praying for a favourable consideration of their claims.

A new periodical is about to be issued from the University of Dublin, to be called the *Hermathena*. It is to be devoted to the several paths of science and classics, and will not interfere with the domain of *Kottabos*, the other paper published by the College. The periodical will be edited by Mr. Tyrrell, one of the junior Fellows.

Dublin, June 4th, 1872.

A GRAND Fancy Bazaar, in aid of the funds of the Great Northern Hospital, was held on Wednesday and Thursday last in the riding-school of the 2nd Life Guards, at Knightsbridge.

Obituary.

GEORGE W. JOTHAM, M.R.C.S., L.S.A., OF KIDDERMINSTER.

AFTER a long lifetime of usefulness spent in the active and arduous duties of his profession, the subject of this notice died on the 7th of May. Mr. Jotham, who had been the leading general practitioner in Kidderminster and surrounding district for some years prior to his death, was born at Bradford, Wiltshire, in 1804, and studied at St. Bartholomew's Hospital, having been a pupil of the great Abernethy. In the year 1828 he went to reside at Kidderminster, and in 1831 was appointed Honorary Surgeon to the Infirmary of that town, which post he held until a a month or two before his death. When he found his health failing, and that he could no longer conscientiously perform the active duties of his office, he tendered his resignation, which was accepted by the Committee of Management with great regret, who immediately passed a resolution "That while greatly regretting the resignation of the senior honorary surgeon, who has been for forty-one years connected with this institution, they cannot refrain from stating their sense of esteem for his services in past years, and acknowledging the very warm interest he has always taken in all connected with the infirmary." At the same meeting he was unanimously elected consulting surgeon. His loss will be acutely felt in the district over which his practice extended, for he was not only prized for his skill and sound knowledge as a surgeon, but also for his thorough and uniform kindliness and benevolence of heart.

JOHN CROUCH, F.R.C.S. ENG.

MR. CROUCH gives an example of a career of great ability and usefulness ruthlessly cut short by bad health. He was born at North Stoneham, near Southampton, in the year 1810, was educated at Hyde Abbey School, Winchester, and was afterwards apprenticed to Mr. Wickham, surgeon of that town. He then became a pupil at St. Thomas's and Guy's Hospitals. After he had passed his examinations at the Hall and College in 1833, he returned to Winchester in the capacity of house-surgeon to the hospital in which he received his earliest instruction. Then he settled at Bruton, in Somersetshire, where he married and enjoyed an extensive practice, and distinguished himself greatly as one of the earliest and most successful ovariotomists whilst as yet that operation was full of terrors. He had the credit of recording the first case of pregnancy and parturition in a patient from whom a diseased ovary had been removed. In order to obtain a wide field of experience, he removed from Bruton to the almost suburban village of Mitcham, but soon afterwards his health broke down, insidious disease of the spinal cord rendering him almost a helpless cripple; but still his courage did not desert him, and on a slight improvement in health he again began to visit the obstetric and gynæcological departments of the hospitals, and writing for the medical press. His disease, however, returned, and after a painful period of suffering he was released on the 18th of April, 1872, aged sixty-two.

HOUSE OF COMMONS.

JUNE 4TH.

COLONEL KNOX asked the Chief Secretary for Ireland whether his attention had been called to the great increase of intoxication in the north-west of Ireland, by means of ether or a mixture of ether and naphtha sold by chemists and grocers.

The Marquis of HARTINGTON said that in 1868 the Irish Government made a full inquiry into the matter, and ascertained that the practice of using ether as a stimulant chiefly prevailed in the counties of Tyrone and Londonderry; but the Board of Inland Revenue reported that, in the existing state of the law, they were unable to interfere. At the present time an inquiry was taking place into the alleged adulteration of whisky in many parts of Ireland, and when

the reports were received they would be answered in conjunction with the question just brought before the House.

Mr. GLADSTONE, in reply to Sir C. Adderley, said the Government hoped to obtain the consent of Parliament to the Public Health Bill during the present session; but the question of order between that and the Corrupt Practices Bill would have to be postponed for a short time.

JUNE 5TH.

Colonel CORBETT asked the Secretary of State for War whether militia surgeons would be remunerated for the losses they would sustain by the new regulations, which transfer those portions of their duties to army surgeons for the performance of which the greater part of their emolument had hitherto been derived.

Mr. CAMPBELL, replying on behalf of the Secretary of State for War, said that any claims preferred by militia surgeons would be carefully considered, but the Government was not prepared with any general scheme to compensate those officers.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 30th ult.:—

Hewett, Frederick Charles, Twickenham.
Holder, William, Hull.
Preston, Augustus Richd. Richd., South Brent, Devon.
Price, Charles William, Merthyr Tydfil.
Swan, Richard Jocelyn, Northleach, Gloucester.

As Assistants in Compounding and Dispensing Medicines:—

Evans, Gwilym, Llandovery.
Watson, William, Rochester.

On the same day the following gentleman passed his First Professional Examination:—

Cookson, Hugh Alexander, Guy's Hospital.

Messrs. Cyril Lloyd Jones and Walter Hamilton Hylton Jessop have been elected Tancred Students at Gonville and Caius College, Cambridge.

LUCKNOW is suffering severely from small-pox, and a few cases of cholera have appeared.

POISONOUS DRAUGHTS.—Two men were poisoned a few days ago at Limehouse, one of them fatally, by taking two "black draughts," purchased at the shop of a medical man in the neighbourhood. The medical man alleged that the said draughts were "the last of the stock" which he had purchased in November. We should like to know how the other parts of the stock of black draughts acted. If medical men will buy old stocks of black draughts they should exercise a little more care in their dispensing.

AT a meeting of the medical profession of Birmingham and the districts, convened by circular, and held on Friday, May 31st, in the theatre of the Midland Institute (James Johnston, M.B., Physician to the Queen's and Children's Hospital, in the chair), the following resolutions were unanimously carried:—1. That this meeting is of opinion that, as the Obstetrical Society has no charter or other legal status in the country, its action in the establishment of a board for the examination of and granting "diplomas" to midwives is not advisable. 2. That the establishment of a Local Board of the resident Fellows of the Obstetrical Society in Birmingham is unneeded and most undesirable. 3. That copies of these resolutions be forwarded to the president and council of the Obstetrical Society in London and the editors of the three London weekly medical journals.

UNIVERSITY OF CAMBRIDGE.—Prof. Humphry has given notice that the Course of Practical Histology will commence on Wednesday, July 3rd, at 12 o'clock, and be continued on Mondays, Wednesdays, and Fridays, during July and August. There will be classes for Practical Osteology in July and August. The course of lectures on Practical Anatomy next term will commence on Monday, October 7th, at 9 A.M., and be continued daily till the end of March, with a fortnight's intermission at Christmas. Attendance during the whole of that period will be required of students who desire to obtain a certificate for the Royal College of Surgeons.

Medical Appointments.

BATCHELOR, F. C., L.R.C.P., M.R.C.S.E., has been appointed Medical Officer for the Stratford District of the Samford Union, Suffolk, vice G. Spurgin, M.R.C.S.E., resigned.

BROWN, S. S., M.R.C.S.E., has been appointed Medical Officer for the Lee District of the Royal Kent Dispensary, vice S. W. Brown, F.R.C.S.E., deceased.

CLARKE, S., L.R.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Drum Dispensary District of the Cootehill Union, Co. Cavan, vice J. Taylor, M.D., deceased.

COLLINS, T., M.R.C.S.E., has been appointed Deputy Governor, Apothecaries' Hall, Dublin, vice J. A. Dirham, M.R.C.S.E., deceased.

GRAY, R., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Armagh Dispensary District of the Armagh Union, vice J. Leslie, L.K.Q.C.P.I., M.R.C.S.E., resigned.

LEE, A. R., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Silsoe District of the Ampthill Union, Bedfordshire.

LOW, D., M.B., C.M., has been appointed Assistant Medical Officer to the Perth District Lunatic Asylum, vice Brodie Cruickshank, M.B., C.M., resigned.

M'GOWAN, W., M.D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Maghera Dispensary District of the Magherafelt Union, Co. Londonderry, vice W. Dobbin, M.D., L.R.C.S.Ed., resigned.

MAHOMED, F. A., M.R.C.S.E., has been appointed Assistant Medical Officer for the Central London Sick Asylum District Infirmary at Highgate, vice G. S. Thom, M.R.C.S.E., resigned.

MOORE, H. C., M.R.C.S.E., has been appointed House-Surgeon and Secretary to the Kidderminster Infirmary, vice John W. Bligh, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

O'DWYER, J., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Scrooby District of the East Retford Union, Nottinghamshire, vice D. Knox, M.D., L.R.C.S.Ed., deceased.

REID, J., L.R.C.P.Ed., L.F.P. & S.Glas., has been appointed Parochial Medical Officer and Public Vaccinator for the Troon District of the Parish of Dundonald, Ayrshire, vice Wm. Douglas, L.F.P. & S.Glas., deceased.

RIDDAN, W., M.R.C.S.E., has been appointed Resident Medical Officer to University College Hospital, vice J. Davies Thomas, M.B., L.R.C.P.L., resigned.

ROGERS, J., M.D., M.R.C.S.E., has been appointed Medical Officer to the Westminster Union Workhouse.

SEATON, J., L.R.C.S.Ed., has been appointed a Surgeon to the Leeds General Infirmary, vice S. Hey, F.R.C.S.E., resigned.

SPENCER, W. H., M.A., M.B., has been appointed Assistant-Physician to the Royal Infirmary, Bristol, vice E. Laulow, M.B., F.R.C.S.E., resigned.

TOUCH, E., M.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Inverkip, Renfrewshire, vice J. Allan, M.B., C.M., resigned.

TOWLE, H., M.R.C.S.E., has been appointed Medical Officer for the Muker District of the Reeth Union, Yorkshire.

Births, Marriages, and Deaths.

BIRTHS.

CUNNINGHAM.—On the 29th ult., at Tillington House, Southsea, the wife of Surgeon-Major Cunningham, M.D., 20th Hussars, of a daughter.

GAITSKELL.—On the 3rd inst., at King's Sutton, the wife of E. F. Gaitskell, L.R.C.P.L., of a daughter.

HILLIARD.—On the 2nd inst., at Belgrave-terrace, Upper Holloway, the wife of R. H. Hilliard, M.D., of a daughter.

MAFFEY.—On the 23rd ult., the wife of John Maffey, L.R.C.P., of St. John's, Wakefield, of a daughter.

POCOCK.—On the 29th ult., at Brixton-road, the wife of E. Wm. Pocock, M.R.C.S.E., of a son.

WELLS.—On the 30th ult., at Fitzroy-street, Fitzroy-square, the wife of J. B. Wells, L.R.C.P.Ed., F.R.C.S.E., of a daughter.

MARRIAGES.

CALTHROP—THOMAS.—On the 4th ult., at Kurnal, Punjab, Christopher Wm. Calthrop, M.D., Professor of Anatomy and Materia Medica, Lahore Medical College, to Honor Cary, eldest daughter of R. W. Thomas, Deputy Commissioner, Kurnal.—No Cards.

LEET—D'ARCY.—On the 28th ult., by special licence, at Churchtown House, Newcastle West, County Limerick, Edward W. Leet, L.K.Q.C.P.I., Assistant-Surgeon H.M.'s Ship, "Sultan" (son of Chas. H. Leet, M.D.), to Bessie Adams, only child of the late Conyers D'Arcy, Esq., of Ringwood, County Limerick.

WINSLOW—GRANT.—On the 1st inst., at the Parish Church, Fulham, Henry Forbes Winslow, M.D., of Sussex House, Hammersmith, to Mary, daughter of the late Capt. Edward John Grant.

DEATHS.

EASTON.—On the 27th ult., at Stranraer, N.B., Dr. James Easton, aged 35.

HARRIS.—On the 23rd ult., at Lansdowne-place, Brighton (after nearly five years of suffering), Charles Harris, Surgeon, late of Fenchurch-street and Guilford-street, Russell-square, London, aged 82. Friends will please accept this intimation.

HOLLINGSWORTH.—On the 23rd ult., John Hollingsworth, M.R.C.S.E., of Greenwich, aged 52.

HUTCHINSON.—On the 28th ult., J. Hutchinson, F.R.C.S.E., of Cheethamhill, Manchester, aged 63.

PRINGLE.—On the 31st of March, at sea, on board the "Paramatta," Geo. Hogarth, eldest son of Jas. H. Pringle, Esq., of Clifthaugh, Roxburghshire, aged 41.

STRANGE.—On the 4th inst., at Elvaston-place, Queen's-gate, Robt. Strange, M.D., aged 75.

Medical Diary of the Week.

Monday, June 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Timothy Holmes, "On the Surgical Treatment of Aneurism in its various forms."

Tuesday, June 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, June 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Timothy Holmes, "On the Surgical Treatment of Aneurism in its various forms."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Dr. Smart, "On African Epidemics of Asiatic Cholera."

Thursday, June 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Friday, June 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Timothy Holmes, "On the Surgical Treatment of Aneurism in its various forms."

Saturday, June 15.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 0½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

THE LATE DISCUSSION ON PYÆMIA.

WE have been requested by *Mr. Hulke* to correct a misrepresentation in the account of his remarks on Dr. Sanderson's communication on Pyæmia at the meeting of the Pathological Society held on May 7th, given at p. 758 in THE LANCET of June 1st, which makes Mr. Hulke to have said in effect that the addition of multiple abscesses to the ordinary (febrile) symptoms of pyæmia constituted septicæmia. Mr. Hulke's actual remarks were to the effect that he regarded pyæmia as a feverish process due to the entrance of some constituent of pus into the circulation, and septicæmia to the ingress of something putrid, animal or vegetable. The disorders so induced are essentially distinct, though sometimes commingling. The introduction of well-filtered pus into the veins of a dog gives rise to feverish symptoms (like those of pyæmia in the human subject), which may soon be followed by recovery, and the experiment may be repeated in the same animal with a similar result. Unfiltered pus, especially if containing coarse particles—e. g., fibrinous clots,—gives rise to similar feverish symptoms, plus multiple abscesses, such as those commonly met with in persons dying of pyæmia after operations. Such abscesses are accidents; they are no essential part of pyæmia, though they largely contribute to the fatal issue, and *their presence does not constitute septicæmia*. The introduction of a filtered putrid infusion into the veins produces vomiting, purging, and profound collapse soon ending in death, the leading symptoms of septicæmia, exhibited by the dog the subject of Dr. Sanderson's demonstration. Mr. Hulke's object was to elicit from Dr. Sanderson a clear enunciation of his views regarding the identity or distinctness of the two processes which his exposition had left uncertain.

A PLEA FOR POOR WOMEN.

THERE is a certain class of people in the world who always object to any proposal, simply, we suppose, because it has been proposed, and not by them; and the same class would probably be found raising an outcry if the thing were left undone. No sooner has a Bill been introduced for the purpose of extending the punishment of whipping, now ordained for the crime of robbery with violence, to cases of cruelty to women and children, than some women are found to petition the House of Commons against it. It is a subject of which members of the medical profession have some cognisance; for those connected with hospitals are only too well aware of the cruel and abominable nature of the crimes that are occasionally perpetrated on defenceless women and children. It is simply monstrous that we should protect old gentlemen returning from their Clubs at night against being garotted, and leave weak women and children to the tender mercies of ruffianly husbands and fathers. It is in the lower walks of life more especially that wife-beating is indulged in by that class, we may suppose, which in former times found pastime in bull-baiting, cock-fighting, and the like. The tables are very often turned when we approach the middle ranks of life; for the woman afflicted with "nerves"—the hysterical, nagging, tyrannical woman—is often allied to a good-natured husband, whose life and home she manages to make wretched. One feels tempted in her case to wish that she could spend a week with one of "Bill Sykes's" type. The Legislature justly steps in to protect those who cannot protect themselves, and we hope that it will come to the assistance of a class of poor women whose lives are worn away in working for drunken, dissolute, and brutal husbands. Physical pain is the one great schoolmaster that commands respect with the cruel, and a few lessons serve to educate them in the way they should go, when nothing else will.

Mr. J. Waring-Curran.—The paper shall receive consideration.

HOSPITAL FOR INFECTIOUS DISEASES, COLCHESTER.

To the Editor of THE LANCET.

SIR,—In answer to Mr. Papillon's letter in your last week's publication, I quote the following from another, bearing the same name, inserted in the *Essex Standard* of May 15th and the *Essex Gazette* of May 19th:—

"The proposal of Mr. Longley, the inspector, was brought before the Board first on March 8th (1870). It was discussed and matured on five different occasions. On July 26th Mr. Dobson's contract for the work was accepted, and the work put in hand. On August 24th Dr. Bree and Mr. Laver appeared in condemnation of the plan; and on September 10th Dr. Smith inspected and pronounced the site to be unexceptionable."

Surely Mr. Papillon must have forgotten his own statement when he wrote the letter to you. But if Mr. Papillon's memory fails him, he has access to the minutes of the proceedings of the Board. If he will refer to them he will find the following letter:—

"Colchester Union. Mr. A. Laing, Clerk.
Aug. 23rd, 1870.

"MY DEAR SIR,—The new fever wards just commenced at the union workhouse are objected to on account of their proximity to some houses at Balkerne Hill. An adjourned meeting of the Board will be held at the workhouse at 11 o'clock A.M. to-morrow (Wednesday), when I am desired to invite the favour of your attendance as one of the *ex-officio* guardians.

I am, dear Sir, yours faithfully,

"C. R. Bree, Esq., M.D." "ARTHUR L. LAING.

If Mr. Papillon does not as chairman remember (I believe he was from home at the time), he will find by turning to the minutes that I, in conjunction with Mr. Laver, the union medical officer, examined and utterly condemned the site. Mr. Papillon will also find that, notwithstanding our united condemnation of the site, the guardians, among whom was the architect of the building, decided to continue the works; and they were continued forthwith, in total disregard of the strong and decided opinion of Mr. Laver and myself. In consequence of this I brought the subject before the Commissioners of Lighting and Paving, who communicated with the Board of Guardians and also the Privy Council. The latter declined to interfere, and the former requested the Poor-law Board to send down an inspector. Dr. Smith attended on September 10th, when, according to his report, the works, which were "just commenced" when the clerk wrote to me, had reached the "first story." Neither Mr. Laver nor myself, who were, of course, better acquainted with the neighbourhood, were asked to meet Dr. Smith, and that gentleman made the unfortunate report which, as I shall show hereafter, was the cause of the great majority of cases of small-pox which have occurred during the present epidemic in Colchester.

Until I received the clerk's letter, I did not even know that any building was in the course of erection, and from the day I gave my opinion against the site I have never had any communication from the Board of Guardians upon the subject. It is quite certain that from the 24th of August to the 10th of September the Board of Guardians were entirely responsible.

Your obedient servant,

June, 1872. C. R. BREE.

A Constant Subscriber should study Wunderlich's treatise, published by the New Sydenham Society. Dr. Ballard's book on Vaccination, or the articles on Vaccination and Small-pox in Reynolds's System of Medicine, will meet the wants of our correspondent.

A WARNING TO MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—As I have no doubt many physicians like myself sub-rent stables, coachhouse, &c., at what may be considered *first*-class hotels, I think it well to caution them of the risk they run in so doing. My case is simply this. I rented a stable, &c., at a certain *Royal* Hotel here at so much a year, and regularly paid for the same. My private residence is in the immediate vicinity of the hotel. On my return home the other day, what was my surprise to find one hour after that my carriage, horse, harness, and everything pertaining to the same, were seized to pay for the landlord's rent. Is this really the law of England?

Yours obediently,

May 30th, 1872. M.R.C.P., &c.

SUFFOCATION AND SELF-SACRIFICE AT CHEMICAL WORKS.

THREE poor fellows have met their death by working at the bottom of some chalk pits at the Felling Chemical Works, Newcastle-on-Tyne, in which accumulations of all sorts of *débris* and chemical refuse seem to have taken place. Two men went first, and no sooner reached the bottom than they were overcome by the poisonous stench, and unable to reach the ladder by which they descended. A very brave and noble man, named James King, volunteered to go to their rescue; but, alas! he only lost his own life. An equally brave and happily more successful man, Cornelius Carr, also nearly perished in an attempt to throw a rope round one of the men. By the time more safe means of relief were matured, and the four men brought up, three were dead, and Carr was unconscious. He is expected to recover. A little more care should be taken in the removal of refuse that can be suddenly converted into such poisonous compounds. It is thought that the gas developed was sulphuretted hydrogen.

An Inquirer.—"Modern Turkey" is published by Hurst and Blackett. The book on "Dry Earth in Surgery" may be obtained of Trübner and Co., Paternoster-row.

F. H. H. should apply to the Secretary, General Post-office, London.

MEDICAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—Some time ago when I made some comments on the treatment I had received from members of the medical profession, you somewhat severely remarked on the line of conduct I chose to adopt. In fairness to myself, I shall feel obliged by your publishing the following case.

On the night of the 1st of April I was called up to see the baby of a Mr. S——, who resides near me. I found the child suffering from an aphthous affection of the mouth, with one or more peculiar spots on the face, not unlike abortive vaccine pustules. I prescribed a mixture containing the chlorate of potash, and requested that the milk it was having from a dairy in the neighbourhood should be discontinued, and English (Aylesbury) condensed milk substituted. To this the mother objected, as she was positive that the milk was the best that could be obtained. On the 2nd of April I again saw the child, and also on the 3rd. On the 4th, the child still continuing the dairy milk, and not appearing to improve under the treatment, the mother asked me if I would object to meet her old doctor, Dr. Archibald Simpson, of 29, Canonbury-park, in whom she placed great confidence. Thinking he was far enough away to be innocuous, I readily agreed to meet him, and sent a messenger, requesting him to state a convenient time. The messenger returned, and 3.30 was fixed for the meeting. Five minutes after that time I called, and found that Dr. Archibald Simpson had arrived before me, and had examined the baby with the stethoscope and thermometer, the child being on the point of being dressed when I entered the room. I thought this proceeding strange on the part of Dr. Archibald Simpson. I informed him of the nature of the contents of the mixture, and that I had recommended the Aylesbury milk, being under the impression that the milk was the cause of the child's indisposition. In this opinion he agreed; and as the mother complained that the mixture caused some smarting, he substituted the nitrate of potash for the sweet spirits of nitre, which substitution the mother on the following day said had not agreed with the child as well as the previous mixture. On leaving, Dr. Archibald Simpson, without referring to me, asked Mrs. S—— when he should see the child again. I followed him to the door, and requested to know the hour when he would call next day. The following day I found that Dr. Archibald Simpson had again arrived before me, repeating the same line of conduct as on the day previous. On leaving he informed Mrs. S—— that he could not call next day, as he was going out of town. On the Saturday I saw the child, which, under the condensed-milk treatment recommended by me, and also sanctioned by Dr. Archibald Simpson, had so far improved that I deemed it unnecessary to call on the Sunday. On the Monday, however, I found on my visit that Dr. Archibald Simpson had visited the child on the Sunday. I immediately refused to again see the child, as I think Dr. Archibald Simpson really had deserved to have the patient.

I ask you, Sir, if such conduct is professional, and if it can be wondered at that the younger members of the profession feel so bitterly annoyed at the treatment and conduct of those who ought to set a good example to them?

I am, Sir, your obedient servant,

Stroud-green-road, June 3rd, 1872. H. AUBERT HUBBAND.

Student.—If the student passes his Matriculation examination in January, he can go up for his Preliminary Scientific in July. The subjects for the 1st M.B. are purely professional. It is optional with the candidate to take up physiology alone the July following that in which he has passed his Preliminary Scientific, and the remaining subjects the year after; or he may take up physiology with the other subjects the second July after passing the Preliminary Scientific. We strongly advise him to work hard and pass his Preliminary Scientific next year. At the hospital he mentions there are special classes for it.

Diatom.—Either will answer our correspondent's purposes. On the whole he would probably prefer No. 1.

A Subscriber had better consult an experienced surgeon on the matter.

THE NAUSEOUS TASTE OF MEDICINES.

To the Editor of THE LANCET.

SIR,—About two years ago I called the attention of your readers to the "nauseous taste of many medicines," and advised various methods for covering and improving it. At the same time I expressed a hope that some of your correspondents would be able to suggest other methods besides those I had mentioned. One or two chemists gave me a hint or two on the point, but I did not obtain much information. I have, however, still kept my attention on the subject, and will thank my medical brethren to afford me any help; for I consider the taste of medicines to be one of our *difficulties* in the treatment of disease, especially among children.—Yours, &c.,

Plymouth, June 5th, 1872. WILLIAM DALE.

P.S.—Your readers will find my letter on the subject in THE LANCET of September 6th, 1869.

PROFESSIONAL AMENITIES IN JAMAICA.

REFERRING to a notice in THE LANCET of March 2nd on the above subject, *Mr. Adolphus*, the practitioner whose conduct was impugned, writes to inform us that he "keeps a chemist and druggist establishment, where medical men buy drugs from him," and that the articles he supplied to Dr. Clark were simply in the way of business, and not for his private and personal service. This union of the druggist with the medical man is, we suppose, a necessity of colonial life, though always to be deplored; but the fact materially alters the complexion of the case. Dr. Clark, though ready to take offence at the charge, does not appear to have taken any steps to discharge his obligation to Mr. Adolphus for an attendance at a distance of twenty-four miles.

A Candidate will find in another part of the current number of THE LANCET the information he requires.

The Rev. Mr. Woodward's letter has been received. It has appeared *in extenso* in the local papers; consequently it is unnecessary that we should print it.

THE PUBLIC HEALTH BILL.

To the Editor of THE LANCET.

SIR,—I hope you will allow me, through the columns of your journal, to call the attention of the profession to what others as well as myself consider the mischievous action now being taken by the Committee representing the British Medical Association towards Mr. Stansfeld's Public Health Bill. This action consists in asking too much at the present time, and will end probably in its withdrawal.

The Bill appears to me to be a remarkably able attempt at first legislation on a very difficult subject, and the Government is entitled to the thanks of the public and our profession for introducing it. I trust some efforts will be made to check the unwise action of the Committee, the members of which seem to think that the first Public Health Bill ought to be *perfection*. When Mr. Stansfeld distinctly told the several deputations that the measure was simply a tentative one, to be followed in due course by further Acts of Parliament, he also intimated that it covered more ground than appeared on the face of it. I am quite sure everyone must admit that the right hon. gentleman has behaved in the most courteous and handsome manner in receiving and paying marked attention to all useful (and adopting several of them) suggestions made by the various deputations.

I believe the action of the British Medical Association, through their Committee, to be as suicidal as was their action towards the Medical Reform Bill of the President of the Council. That was a very good Bill.

The Bill as it stands is a very favourable one to our profession, and in spite of the opposition it will receive from bodies by no means friendly to us, such as boards of guardians, town councils, &c., I sincerely wish it will speedily become law. If the suggested amendments (or even a goodly proportion of them) mentioned in THE LANCET a couple of weeks back are adopted by the Government, we ought to be quite satisfied, and thankfully accept this as an instalment of legislation on a very intricate subject, affecting as it does so many conflicting interests.

I remain, Sir, your obedient servant,

M.D. LOND., AND A MEMBER OF THE

May 22nd, 1872. B.M. ASSOCIATION.

Mr. D. Birtwell should consult the Students' Number of THE LANCET. He had better address the authorities of the University or qualifying body for the special information he requires. A course of Practical Anatomy embraces Demonstrations and Dissections. We think there would be much difficulty in obtaining the required licence under the circumstances.

G. W. S., (London.)—We decline to recommend any particular medical man.

Mr. Dalby's paper has been received.

A Subscriber of Fifteen Years' Standing is only entitled to the single fee.

Mr. D. M. Robb.—Certainly not.

OCCASIONAL INSUSCEPTIBILITY OF INFANTS TO SMALL-POX CONTAGION.

To the Editor of THE LANCET.

SIR,—Permit me to offer one case in support of the remarks made by Dr. Thursfield in your journal of this day on the above subject.

On the 22nd of January of the present year I was called to attend a Mrs. P——, the wife of an English labourer, whom I found in the vesicular stage of natural semi-confluent small-pox, and at the time suckling her youngest child, then only two months old. Neither mother nor child had ever been vaccinated. The infant (contrary to my recommendation) was permitted to be suckled two or three days longer, after which it was vaccinated, and nourished from the bottle, although, owing to unavoidable circumstances, it continued to be attended to by the mother until the vaccination was perfect, when it was then removed to a distance, and nursed by a stranger, under whose care it remained for about fourteen days, when it was brought back to the mother, who again began to suckle the child, although she was barely able to walk about the house. The mother made a good and rapid recovery, with little disfigurement. Up to the present time both mother and infant have continued to improve in health, the infant at no time showing any signs of small-pox or other exanthematous affection.

This case, of course, cannot be considered as similar to the ones described by your correspondent; yet, considering that the child was exposed to infection for a period of ten days, and suckled by a mother who at the time was suffering from confluent natural small-pox, I think that surely it tends to prove that there is a certain amount of insusceptibility to contagion of small-pox in infants. Yet let it be again observed that the infant remained exposed to the infection for four or five days *before* being vaccinated. Had it not been vaccinated at that time, and infected thoroughly, is it very likely that the infant would have escaped?

It seems to me that vaccination in this case had really prevented the variolous poison acting upon the child's system. The facts remain the same, and I would willingly leave the matter in more able hands to judge of the *preventive* powers of vaccination.—Yours truly,

Plas Mari, Landore, Glamorgan, June 1st, 1872. W. R. S. JEFFERIES.

"DOCTORS OR NOTHING."

A CORRESPONDENT in the *Broad Arrow* remarks truly enough that the medical officers of a regiment are dubbed "Doctor" by all alike, from the colonel to the drummer-boy, and that quite irrespective of any degree or title that they may possess. He adds that on presenting a cup to his regiment on promotion, it was found on being handed round for inspection to bear the inscription—"Presented by *Sergeant*-Major," &c. This reminds us of a story we once heard of a medical officer asking at a railway station for a ticket at the Government rate. The official inquired, "What's your rank?" On being told Surgeon-Major, he remarked, "Well, you are an awful swell for a *Sergeant*-Major."

X. Y. Z. (Newcastle-on-Tyne) should consult his solicitors. We cannot undertake the responsibility of advising him in the matter.

TREATMENT OF RABIES.

To the Editor of THE LANCET.

SIR,—Notwithstanding the cauterisation of the wounds received by individuals from the bites of rabid animals, occasionally we hear of rabies subsequently occurring, and of horrible deaths in consequence. Yet the poison which enters into the system at the onset, through a bite, is but little; still less remains, it may be assumed, after cauterisation (partially failing) has been effected, and that little remnant, judging by the time which is requisite for its malignant influence to become seriously manifest (if at all), is probably in a comparative sense the reverse of powerful. Such being a fair estimate of the early position, it is not unreasonable perhaps to suppose, as I do, that by judicious persistent treatment (supplementary to cauterisation), immunity from the dreaded fatal catastrophe might invariably be secured. But what particular mode of persistent treatment would be regarded with favour? In uncertainty as to the presence or absence of the poison, extreme or violent measures would be generally accounted as rash adventures. Happily there are alternatives. As a rule, extra stress might safely be laid on the drainage of the patient's system by all its natural outlets, or by keeping up a discharge from the cauterised wound, or, better perhaps, by affixing a seton near to that part of the organism which may have been noticed as apparently the most directly and intensively affected when rabies has been developed. For the necessary replenishment of the system, recourse could be had to a scientific regimen. As regards alteratives (specially so-called) and antidotes, a selection might be made from the divers valued kinds, and enlisted into useful service. Likely enough though, by means far less complex than those I have suggested, the desired immunity from any chance of rabies attacking might be obtained. Vigorous daily exercise, inducing free perspiration (care being taken to avoid sudden chills) has cast off many a slow and stubborn poison from many a burdened system. Equally effective it might prove with respect to the poison in question. In short, security, I think, might be guaranteed by the adoption of any means capable of highly accelerating change in the solids and fluids of the system, without deranging, or materially so, the necessary conditions of health. A foremost aim in the treatment of patients who have been bitten by rabid animals should be (in a partially literal sense) to make "new men" or women of them. For old elements, as far as possible, there should be substituted new. Ample scope is allowed from the period of the infliction of a bite to that in which confirmed rabies is at all likely to appear for advancing a revolution of the salutary kind indicated; and it would be a wonder to me if, amid the changes wrought, any remnant of the poison which had escaped cauterisation should continue to retain its position and capacity for evil. But the ordinary practice is little to profit (so far as prevention is concerned) by the vantage ground of time. Would it be so were the approach of the fatal crisis throughout distinctly traceable? Ought it to be so merely because no timely warning is given, save the warning of past experience, that danger is to be apprehended despite of cauterisation, and that, too, for months beyond? Surely, so long as there is reason for apprehension there is reason for continuity of precautionary treatment. Experiment, in the direction pointed to, yet may demonstrate that to guard unfailingly against an attack of rabies is possible and easy, though to subdue it when raging has hitherto baffled, and may continue to baffle, the powers of medical science.

Yours respectfully,
May 23rd, 1872. NO DOGMATIST.

THE BAKER BROWN FUND.

THIS Fund is raised on behalf of Mr. Isaac Baker Brown, who is paralysed, and in great pecuniary distress. The following additional subscriptions have been received:—

Amount previously advertised	£346	14	0	Dr. Smith, Weymouth ...	£1	1	0
British Medical Benevolent Fund	30	0	0	Dr. Moorhead, ditto	1	1	0
Dr. W. Begbie, Edinburgh	5	5	0	Dr. Collum, Surbiton ...	2	2	0
Dr. Marion Sims, New York	5	5	0	Mr. Lord, Hampstead ...	1	1	0
Mr. Winchester, Maidenhead	2	2	0	Dr. Jelly, Madrid	1	1	0
Mr. Derbyshire, ditto ...	1	0	0	Mr. Wm. Pretty, Lower Norwood	0	10	6

Treasurer and Trustee, Dr. Forbes Winslow, 23, Cavendish-square, to whom subscriptions may be sent.

Mr. F. W. Casson, (Hull.)—We regret our inability to trace the paragraph from the reference given by our correspondent.

Dr. Latham is thanked for his courtesy.

M.D., (Colchester.)—We are unable to notice the subject this week.

VACCINATION AS A PREVENTIVE OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—With reference to the discussion now going on in your columns on the evidence in favour of vaccination as a preventive of small-pox, I may mention the following case which has occurred in my practice.

John E——, aged thirty-five, vaccinated in infancy, was seized with the premonitory signs of discrete variola. As soon as possible I vaccinated all in the house. On the third day after the operation the youngest child, aged two years, was seized with distinctive, though slight, symptoms of variola; and in the usual time a few papulæ appeared, which ran the ordinary course, only accompanied by itching. I should remark that this child had never previously been vaccinated, and the question which arises is, Did the vaccination so recently performed modify the disease in this case?

I am, Sir, yours truly,
Ilfracombe, June 3rd 1872. E. F. H. BURROUGHS.

W. D.—The licence of the Apothecaries' Hall, London, is a sufficient qualification for medical service in a merchant ship. Some Companies and owners, however, require Hall and College qualifications. The former is sufficient to meet the requirements of the Merchant Shipping Act.

THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Your correspondent, "Primus in Indis," seems to think the medical charge of a native infantry regiment almost medical extinction, and proposes that such should be committed to the graduates of the different Universities. It is but a few years since I left the Indian service; yet in my day the surgeon to a native regiment was never looked down upon, and many men so employed for years have work of the very highest class at the different Presidencies. There is a clerical error, I presume, in the letter of your correspondent, since he says that military officers can get £12,000 a year. £1000 is, I think, the highest that any officer can retire upon. It is true that for a considerable part of the year an officer in medical charge of a native regiment is not overburdened with work, and the cases have a considerable amount of sameness. But medical officers in civil employ have just the same run of cases and about the same number of Europeans to treat medically as have those in charge of native regiments. When epidemics or endemics are abroad, "Primus in Indis" will find his hands full. I was on general duty with about eight different native regiments and detachments during my first year in India, and at the end of it received an offer of a civil appointment to a more lucrative post from the Commissioner of the district, which I could not accept on account of juniority; yet I was esteemed one of the most fortunate men in my service, and all *sodes*, I believe, dated from native detachments. One of the most scientific men that I knew in India was for many years in charge of a local native corps, and he had absolutely kept up with European medical literature. He was esteemed by all the natives around, and had a considerable field in operating and treatment generally from the district.

Medical extinction depends much more on the man than his position. He may well, if he chooses, make his own name even in a native regiment. There is so much to be done medically and in a sanitary point of view that if anyone works fairly he may be assured of his reward.—I am, &c.,
June, 1872. RETIRED INDIAN SURGEON.

MASTER AND SERVANTS (WAGES) BILL.

IT is not thought by well-informed members that this Bill stands much chance of passing this session.

R. H. (London, E.C.) is advised to consult a local practitioner. We never give special recommendations.

LITHOTOMY FORCEPS.

To the Editor of THE LANCET.

SIR,—In THE LANCET for May 18th, under the heading of "Some Improved Surgical Instruments," Mr. Teevan illustrates and describes some open polypus forceps of very slight construction, with fenestrated blades, serrated on the inside, which he uses for extracting a stone in the adult. Such forceps, with fenestrated blades and serrated edges, have been in use at the Sussex County Hospital for the last thirty years. They were originally made of various shapes and sizes by Messrs. Weiss and Co., of the Strand, at the request of my father, Mr. Farmer, of Brighton, and have been frequently used in extracting stones at the above hospital.—Yours truly,

W. FARMER,
Late Pupil at the Sussex County Hospital.
St. Bartholomew's Hospital, June, 1872.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Humphry, Cambridge; Mr. T. Holmes; Mr. J. F. Streatfeild; Dr. Heywood Smith; Surgeon-Major De Renzy; Dr. Aveling; Mr. Stafford; Mr. Crouch; Mr. Hensley; Mr. Hulke; Mr. Kemp; Mr. Hutchinson; Dr. Sutherland; Mr. Searle, Ovingdean; Mr. Kelly; Dr. M'Mordie; Dr. J. Johnston, Birmingham; Mr. Newman; Mr. Hughes; Dr. Corner, Poplar; Mr. Hodges, York; Dr. Maffey, Wakefield; Mrs. Payton Wright; Mr. Jefferiss, Landore; Dr. Fleming, Dalhousie; Dr. Hughes, Kolapore; Mr. Keele; Mr. Scott, Barnley; Dr. More, H.M.S. *Glasgow*; Mrs. Gill; Mr. Hilgert; Dr. Aldis; Mr. Matthews, Walsingham; Mr. Birtwell; Dr. Collins; Mr. A. Gregory, Cheam; Mr. Shine; Mr. Ebsworth; Dr. Russell, Glasgow; Dr. Robinson, Bailieborough; Rev. M. Woodward, Folkestone; Sir Henry Thompson; Mr. Banks; Mr. Jovis; Mr. R. Whitfield, Rainham; Mr. J. V. Solomon, Birmingham; Mr. T. Wharton; Dr. Robertson, Cheltenham; Dr. Hills, Thorpe; Mr. J. Smith; Mr. Johnstone, Sandhurst; Mr. Robbs, Brigg; Dr. Rutherford, Pulborough; Mr. Schofield, Wateringbury; Mr. Turner, Loughborough; Dr. Curran, Woodhouse; Mr. Burroughs, Ilfracombe; Dr. Husband; Rev. A. Kinder, Newchurch; Dr. J. J. Chisolm, Baltimore; Mr. Stirling, Grimsby; Mr. Hargreave, Henley; Mr. Farmer; Mr. Catton, Belfast; Mr. Eastlake; Mr. Rose, Darlington; Mr. Hindley, Waltham; Dr. D. Easton, Stranraer; Mr. Casson, Hull; Dr. Playfair; Dr. Anderson, Kingston, Jamaica; Mr. Bate; Mr. Clark, Jamaica; Dr. Day, Stafford; Mr. W. F. Clarke; Mr. Peck; Mr. Horton, Bodmin; Mr. March, Aberdeen; Mr. Davison, Newburn; Mr. Steel, Cork; Mr. Sanderson; Dr. Dale, Plymouth; Dr. Redwood, Rhymney; Mr. Martin, Sidcup; Mr. Roberts; Mr. Loome, Barton-on-Trent; Mr. Watney, Sutton; Dr. Santos, Madrid; Dr. Cheadle; Mr. Hughes, Corwen; Mr. Benwell; Dr. Watson, Dresden; Mr. J. Thornhill, Birkenhead; Mr. Barnes, Long Buckby; Mr. J. Phillips, Newcastle; Mr. Steward, Elgin; Mr. Rollison, St. Albans; Mr. Robertson; Mr. Stephenson; Mr. Mahomed; Mr. Colmar, Reigate; Mr. Davies, Winchester; G. W. S.; A Constant Subscriber; Retired Indian Surgeon; A. B. C.; Diatom; Anti-Quackery; Student in Medicine, Paris; Beta; M.A.; A Constant Reader; &c. &c.

Dublin Evening Mail, Cope's Tobacco Plant, Isle of Man Times, Edinburgh Courant, Mansfield Advertiser, Overland Commercial Gazette, Journal of the Gynæcological Society of Boston (U.S.), *Jamaica Colonial Standard, Builders' Weekly Reporter, Essex Standard, Saunders's News-Letter, Cumberland Advertiser*, and *Beverley Guardian* have been received.